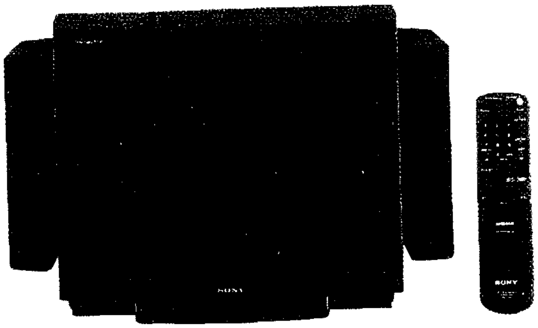
KV-27XBR96S/32XBR96S
RM-Y114A

SERVICE MANUAL



US Model
KV-27XBR96S
Chassis No. SCC-F16M-A
KV-32XBR96S
Chassis No. SCC-F16N-A

Canadian Model
KV-27XBR96S
Chassis No. SCC-F17M-A
KV-32XBR96S
Chassis No. SCC-F17N-A

FN CHASSIS

MODELS OF THE SAME SERIES	
KV-27XBR96S/32XBR96S	KV-27XBR95S/32XBR95S
KV-27XBR25/32XBR25	KV-32XBR90S
KV-27XBR35/32XBR35	KV-32XBR91S

SPECIFICATIONS

Television system	American TV standards
Channel coverage	VHF: 2-13 UHF: 14-69 CABLE TV: 1-125
Picture tube	Microblack™ Trinitron® tube 27-inch picture measured diagonally 29-inch picture tube measured diagonally (KV-27XBR96S) 32-inch picture measured diagonally 34-inch picture tube measured diagonally (KV-32XBR96S)
Antenna	75 ohm external antenna terminal for VHF/UHF
Input jacks	VIDEO IN 1, 2 and 3 S VIDEO IN (4-pin mini DIN) Y : 1 Vp-p, 75-ohms unbalanced, sync negative C : 0.286 Vp-p (Burst signal) 75-ohms Video (phono jacks) : 1 Vp-p, 75-ohms unbalanced, sync negative Audio (phono jacks) : 500 mVrms (100% modulation) Impedance : 47 kilo-ohms SIRCS (mini jack) 5 Vp-p
Output jacks	MONITOR OUT S VIDEO MONITOR OUT (4-pin mini DIN) Y : 1 Vp-p, 75-ohms unbalanced, sync negative Video (phono jacks) : 1 Vp-p, 75-ohms unbalanced, sync negative Audio (phono jacks) : 500 mVrms (100% modulation) Impedance : 10 kilo-ohms SIRCS (mini jack) 5 Vp-p AUDIO OUT (VARIABLE) (phono jacks) More than 900 mVrms (100% modulation) at the maximum volume setting (variable) Impedance : 5 kilo-ohms AUDIO OUT (phono jacks) 900 mVrms (100% modulation) Impedance : 5 kilo-ohms

- Continued on next page -

TRINITRON® COLOR TV

SONY®

MICROFILM

Speaker output	FRONT : 13W×2 (8 ohms) REAR : 6.5W×2 (8 ohms)
Speaker size	Tweeter 57 mm (2 1/4 in.)× 2 units (FRONT) Tweeter 57 mm (2 1/4 in.)× 2 units (SIDE) Woofer 130 mm (5 1/8 in.)× 2 units
Audio frequency response	Tweeter 250Hz-20kHz Woofer 40Hz-250Hz
Power requirements	120 V AC, 60 Hz
Power consumption	270W
Dimensions (w/h/d)	(KV-27XBR96S) w/speakers : 894×560×532 mm (35 1/4×22 1/8×21 inches) w/o speakers : 684×560×532 mm (26 7/8×22 1/8×21 inches) (KV-32XBR96S) w/speakers : 1000×663.5×586 mm (39 3/8×26 1/8×23 1/8 inches) w/o speakers : 794×663.5×586 mm (31 3/8×26 1/8×23 1/8 inches) Speaker (1) : 100×480×305 mm (4×19×12 1/8 inches)
Weight	(KV-27XBR96S) w/speakers : 62.6 kg (138 lb 1/8 oz) w/o speakers : 52 kg (114 lb 11 oz) (KV-32XBR96S) w/speakers : 86.2 kg (190 lb 1 oz) w/o speakers : 75.6 kg (166 lb 11 oz) Speaker (1) : 5 kg (11 lb 1 oz)
Supplied accessories	Remote Commander RM-Y114A (1) with 2 size AA (R6) EVEREADY batteries Detachable speaker parts — Speaker boxes (L/R) — Speaker box brackets (L/R) — Protective pads (8) — Bolts (rubber padded) (8) — Bolts (non-rubber padded) (8) — Speaker cords (2)
Optional accessories	U/V mixer EAC-66 Connecting cable RK-74A VMC-810S/820S YC-15V/30V

Design and specifications are subject to change without notice.

(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL TO SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.

(ATTENTION)

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURTCIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION!!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS ÁLA SECURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MAPQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES CONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES REGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCEDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.

TABLE OF CONTENTS

Section *Title* *Page*

1. GENERAL

Locating Controls and Connnectors ········ 5
Installing the Detachable Speakers ········ 7
Using the On-Screen Menus ········ 8
Setting CABLE ON or OFF ········ 10
Presetting TV Channels ········ 11
Watching TV Programs ········ 14
Using Closed Caption ········ 15
Using Convenient Features ········ 16
Selecting a Picture and Sound Mode ········ 17
Watching Two or More Pictures at Once (PIP) ········ 18
Adjusting the Picture ········ 21
Adjusting the Sound ········ 23
Customizing the Screen Display ········ 26
Using Timer-Activated Functions ········ 28
Setting FAVORITE CHANNEL ········ 32
Using the Programmable Remote Commander ········ 33
Troubleshooting ········ 37

2. DISASSEMBLY

2-1 Rear Cover Removal ········ 38
2-2 Chassis Assy and Front Block Assy Remocal ········ 38
2-3 P3 Board Removal ········ 39
2-4 UT Bracket Removal ········ 39
2-5 G Board Bracket Removal ········ 40
2-6 D Board Removal ········ 40
2-7 U Bracket Removal ········ 41
2-8 Connector Cable ········ 42
2-9 Service Position ········ 43
2-10 Demagnetization Coil Removal ········ 43
2-11 Picture Tube Removal ········ 44

3. SET-UP ADJUSTMENTS

3-1 Beam Landing ········ 45
3-2 Convergence ········ 46
3-3 Focus Adjustment ········ 49
3-4 G2 (Screen) and White Balance Adjustments ········ 50

4. SAFETY RELATED ADJUSTMENTS ········ 51

5. CIRCUIT ADJUSTMENTS

5-1 Electrical Adjustment by Remote Commander ········ 54
5-2 A Board Adjustments ········ 56
5-3 P2 Board Adjustments ········ 59
5-4 P3 Board Adjustments ········ 60
5-5 VC Board Adjustments ········ 61

Section *Title* *Page*

6. DIAGRAMS

6-1 Block Diagram (1) ········ 63
6-2 Block Diagram (2) ········ 68
6-3 Block Diagram (3) ········ 73
6-4 Block Diagram (4) ········ 77
6-5 Frame Schematic Diagram ········ 81
6-6 Circuit Boards Location ········ 84
6-7 Schematic Diagrams and Printed Wiring Boards ········ 84
  • UT Board ········ 85
  • U Board ········ 86
  • A Board ········ 95
  • D Board ········ 99
  • E1 Board ········ 100
  • E2 Board ········ 109
  • G Board ········ 111
  • VC Board ········ 113
  • M Board ········ 113
  • V Board ········ 114
  • S Board ········ 115
  • HX1 Board ········ 115
  • HX2 Board ········ 116
  • P2 Board ········ 125
  • P4 Board ········ 125
  • P3 Board ········ 127
  • X3 Board ········ 130
  • Y2 Board ········ 133
  • C Board ········ 134
6-8 Semiconductors ········ 138

7. EXPLODED VIEWS

7-1 Chassis ········ 141
7-2. Picture Tube ········ 142

8. ELECTRICAL PARTS LIST ········ 143

SAFETY CHECK-OUT

(US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer :

1 Check the area of your repair for unsoldered or poorly-soldered connections Check the entire board surface for solder splashes and bridges.
2 Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors
3 Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced Be absolutely certain that you have replaced all the insulators.
4 Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5 Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement
6 Check the line cord for cracks and abrasion. Recommend the replacement of any such line cord to the customer
7 Check the condition of the monopole antenna (if any) Make sure the end is not broken off, and has the plastic cap on it Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement
8 Check the B+ and HV to see they are at the values specified Make sure your instruments are accurate;be suspicious of your HV meter if sets always have low HV
9 Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers) Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2 A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground;the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

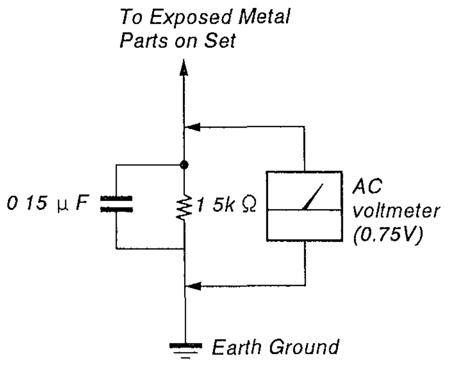


Fig A Using an AC voltmeter to check AC leakage.

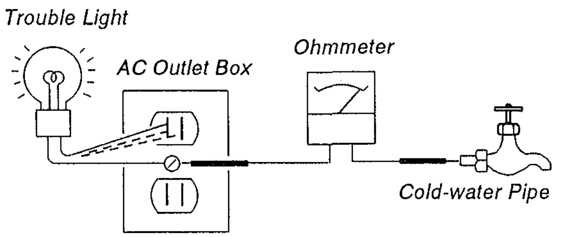


Fig B. Checking for earth ground.

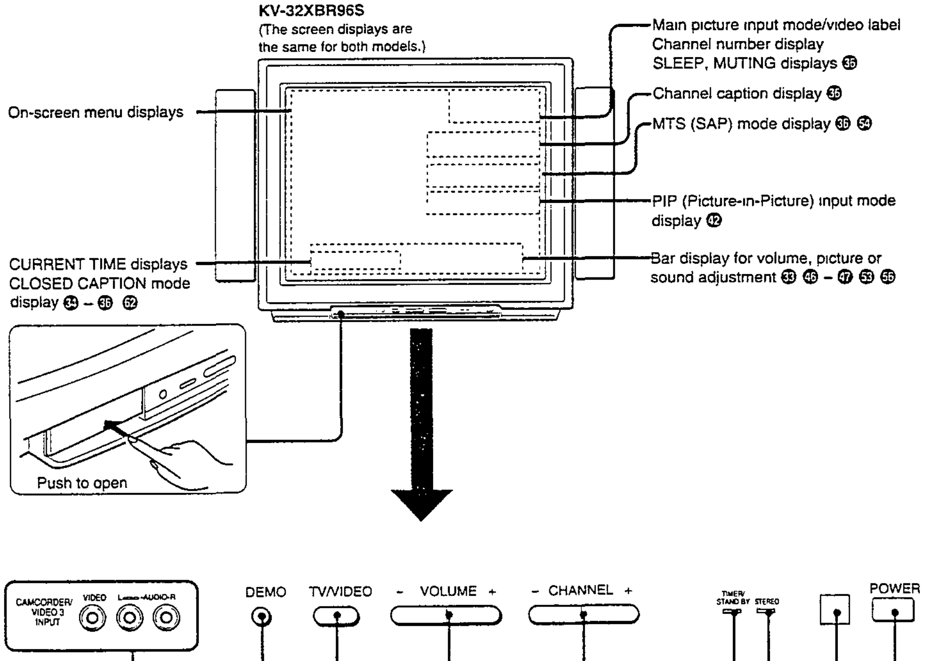
SECTION 1
GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remein as in the manual.

Locating Controls and Connectors

For details, see the pages indicated by the numbered black circles ●.

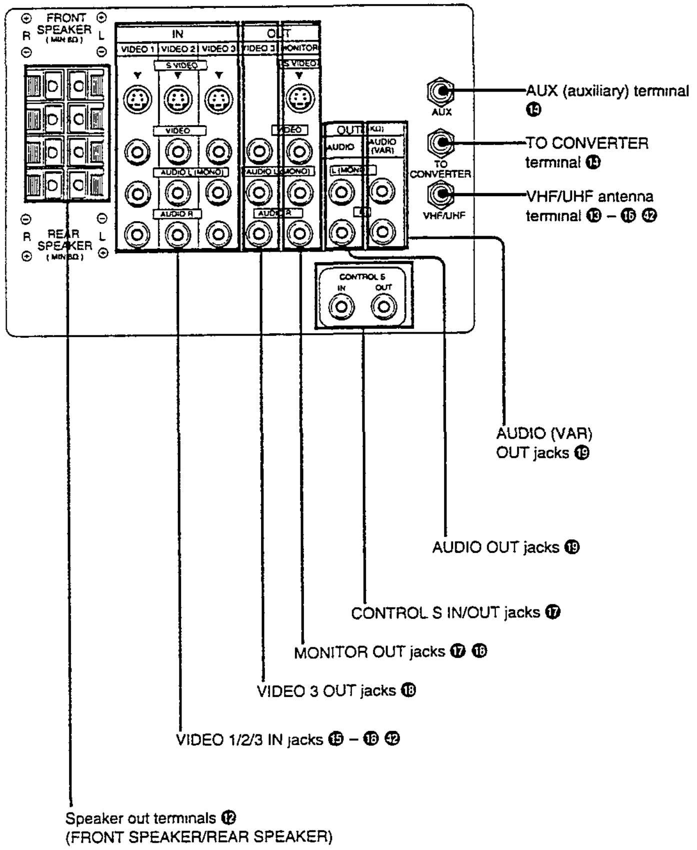
Front


KV-32XBR96S
(The screen displays are the same for both models.)
On-screen menu displays
CURRENT TIME displays
CLOSED CAPTION mode display ㉞ – ㊱ (62)
Main picture input mode/video label
Channel number display
SLEEP, MUTING displays ㉟
Channel caption display ㉟
MTS (SAP) mode display ㊱ (54)
PIP (Picture-in-Picture) input mode display ㊷
Bar display for volume, picture or sound adjustment ㉝ ㊻ – ㊼ (53) (56)
Push to open
CAMCORDER/ VIDEO 3 INPUT
VIDEO
L-AUDIO-R
DEMO
TV/VIDEO
- VOLUME +
- CHANNEL +
TIMER/ STAND BY
STEREO
POWER
POWER button*
Remote control detector
STEREO indicator (54)
TIMER/STAND BY indicator (64)
CHANNEL +/– buttons* ㉗ ㉙ ㉝ (57) (74)
VOLUME +/– buttons* ⑲ ㉝ ㉟
TV/VIDEO button*
DEMO (demonstration) button ㊲
CAMCORDER/VIDEO 3 INPUT jacks ⑯ ⑱
(VIDEO, AUDIO L/R)

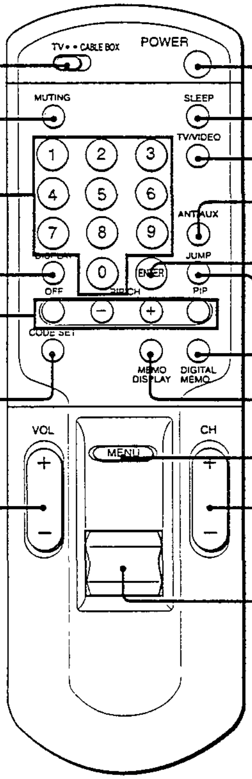
* Buttons with the same function are also located on the Remote Commander (p. 8).

Note
The instructions in this manual are based for the most part on operating the TV with the Remote Commander. You can also use the buttons on the TV that have the same function.

Rear


FRONT SPEAKER
REAR SPEAKER
IN
OUT
VIDEO 1
VIDEO 2
VIDEO 3
MONITOR
S VIDEO
AUDIO
AUDIO (VAR)
CONTROL S
AUX
TO CONVERTER
VHF/UHF
AUX (auxiliary) terminal ⑭
TO CONVERTER terminal ⑭
VHF/UHF antenna terminal ⑬ – ⑯ ㊷
AUDIO (VAR) OUT jacks ⑲
AUDIO OUT jacks ⑲
CONTROL S IN/OUT jacks ⑰
MONITOR OUT jacks ⑰ ⑱
VIDEO 3 OUT jacks ⑱
VIDEO 1/2/3 IN jacks ⑮ – ⑱ ㊷
Speaker out terminals ⑫
(FRONT SPEAKER/REAR SPEAKER)

Remote Commander RM-Y114A (Outer panel controls)


TV• • CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
7
8
9
0
ANT/AUX
JUMP
ENTER
OFF
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
CH
MENU

TV/CABLE BOX selector

MUTING button ㊱

0 – 9 buttons ㉛ ㉝ (57) (72) (74)

DISPLAY button ㊱

PIP (Picture-in-Picture) buttons ㊶ – ㊺

CODE SET button (72) (73)

VOL (volume) +/– button* ⑲ ㉝ ㊱

POWER button*

SLEEP button ㊱

TV/VIDEO button*

ANT/AUX (antenna/auxiliary) button ㉖ ㉜

ENTER button

JUMP button ㊲

DIGITAL MEMO button ㊳

MEMO DISPLAY button ㊳

MENU button

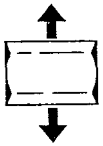
CH (channel) +/– button* ㉗ ㉙ ㉝ (57) (73)

Rocker control

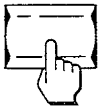
Using the rocker control

Use the rocker control to make on-screen menu selections (see p. 22).

Press the control up or down to make a selection.



Click the control to execute the selection.



* Buttons with the same function are also located on the TV (p. 6).

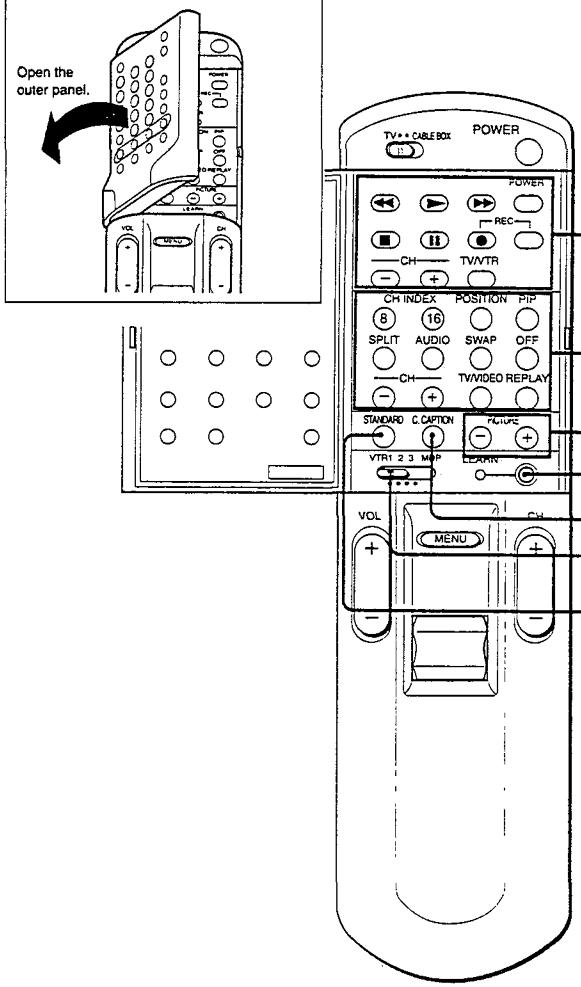
Note

If the TV/CABLE BOX selector is set to CABLE BOX, the Remote Commander is able to control a connected cable box, not the TV (p. 74). Set the selector to TV to control the TV with the Remote Commander.

Remote Commander (Inner panel controls)

Opening to the inner panel

Open the outer panel.


TV• • CABLE BOX
POWER
POWER
REC
CH
TV/VTR
CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN
VOL
CH
MENU

Video operating buttons (70) – (71)

PIP (Picture-in-Picture) buttons ㊶ – ㊺

PICTURE +/– buttons ㊼

LEARN button and indicator (75)

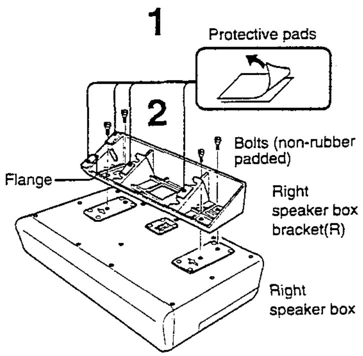
C. CAPTION (Closed Caption) button ㉞ – ㉟

VTR1-2-3 MDP selector (70) – (72) (75) – (77)

STANDARD button ㊵ ㊼

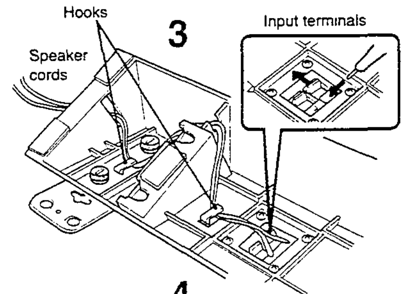
Installing the Detachable Speakers ➡

Follow these instructions to assemble and install the detachable speakers (left and right sides) to the TV. Other installation examples appear on the next page. After installing the speakers, make sure SPEAKER is set to "ON" (p. 55).

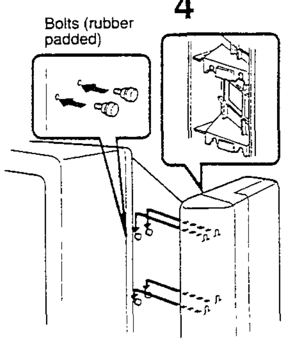

1
Protective pads
2
Bolts (non-rubber padded)
Flange
Right speaker box bracket(R)
Right speaker box

1 To install the right speaker box, remove the backing from four protective pads, and attach the pads to the right speaker box bracket (R) as shown.

2 Place the right speaker box bracket on the right speaker box as shown, with the bracket flange on the bottom, and the four holes aligned; then insert and tighten the four bolts (non-rubber padded).


Hooks
3
Input terminals
Speaker cords

3 Attach the speaker cords to the input terminals on the speaker box, matching the cord and terminal colors. Then insert the cords under the hooks.

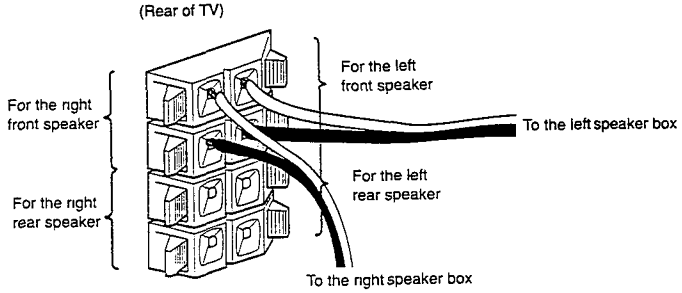

Bolts (rubber padded)
4

4 Attach the supplied bolts (rubber padded), then install the speaker box to the right side of the TV.

5 Repeat steps 1 – 4 to assemble and install the left speaker box; then follow the instructions on the next page to connect the speaker cords to the TV.

Note
The speaker grill cover are not removal.

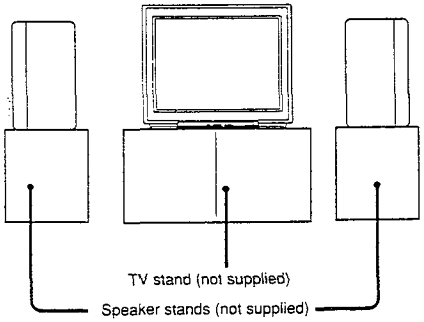
Connecting the speaker cords to the TV


(Rear of TV)
For the left front speaker
For the right front speaker
To the left speaker box
For the left rear speaker
For the right rear speaker
To the right speaker box

Caution
Always match the speaker cord and terminal colors when making the connection.

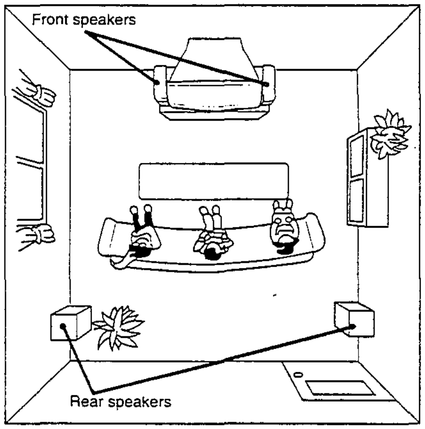
Using the speakers detached from the TV

You can place the speakers on speaker stands (not supplied) rather than attaching them to the TV. Be sure to position the speaker boxes as shown.


TV stand (not supplied)
Speaker stands (not supplied)

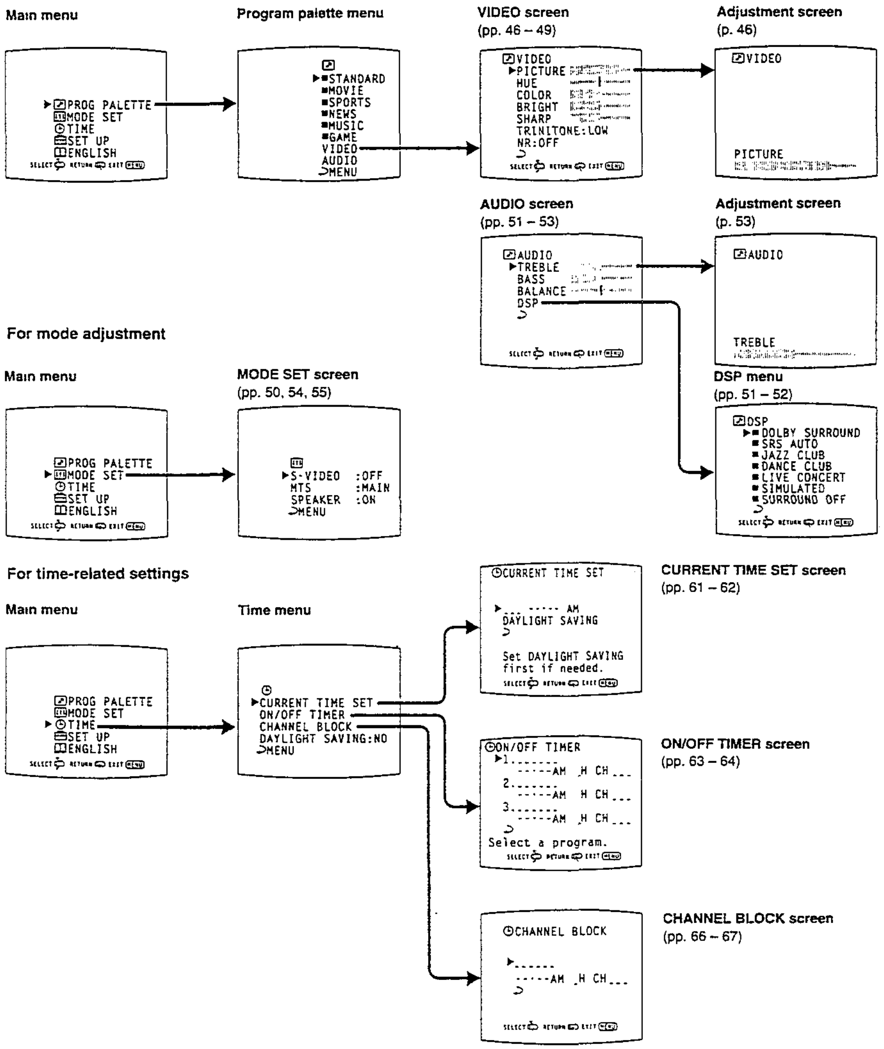
Connecting optional speakers

You can connect optional speakers mounted to a rear wall to create a surround effect. After connecting the rear speakers, set REAR SPEAKER to "YES" (p. 56).


Front speakers
Rear speakers

Using the On-Screen Menus

The following flow chart shows the different levels of on-screen menus that you can use to make various adjustments and settings. See the indicated pages for instructions on using each feature.



For picture and sound quality adjustment

Main menu

```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
```

Program palette menu

```
▶STANDARD
 MOVIE
 SPORTS
 NEWS
 MUSIC
 GAME
 VIDEO
 AUDIO
 MENU
```

VIDEO screen
(pp. 46 – 49)

```
VIDEO
▶PICTURE
 HUE
 COLOR
 BRIGHT
 SHARP
 TRINITONE:LOW
 NR:OFF
```

Adjustment screen
(p. 46)

```
VIDEO

PICTURE
```

AUDIO screen
(pp. 51 – 53)

```
AUDIO
▶TREBLE
 BASS
 BALANCE
 DSP
```

Adjustment screen
(p. 53)

```
AUDIO

TREBLE
```

DSP menu
(pp. 51 – 52)

```
DSP
▶DOLBY SURROUND
 SRS AUTO
 JAZZ CLUB
 DANCE CLUB
 LIVE CONCERT
 SIMULATED
 SURROUND OFF
```

For mode adjustment

Main menu

```
 PROG PALETTE
▶MODE SET
 TIME
 SET UP
 ENGLISH
```

MODE SET screen
(pp. 50, 54, 55)

```
▶S-VIDEO   :OFF
 MTS       :MAIN
 SPEAKER   :ON
 MENU
```

For time-related settings

Main menu

```
 PROG PALETTE
 MODE SET
▶TIME
 SET UP
 ENGLISH
```

Time menu

```
▶CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 DAYLIGHT SAVING:NO
 MENU
```

CURRENT TIME SET screen
(pp. 61 – 62)

```
CURRENT TIME SET
▶.. ----- AM
DAYLIGHT SAVING

Set DAYLIGHT SAVING
first if needed.
```

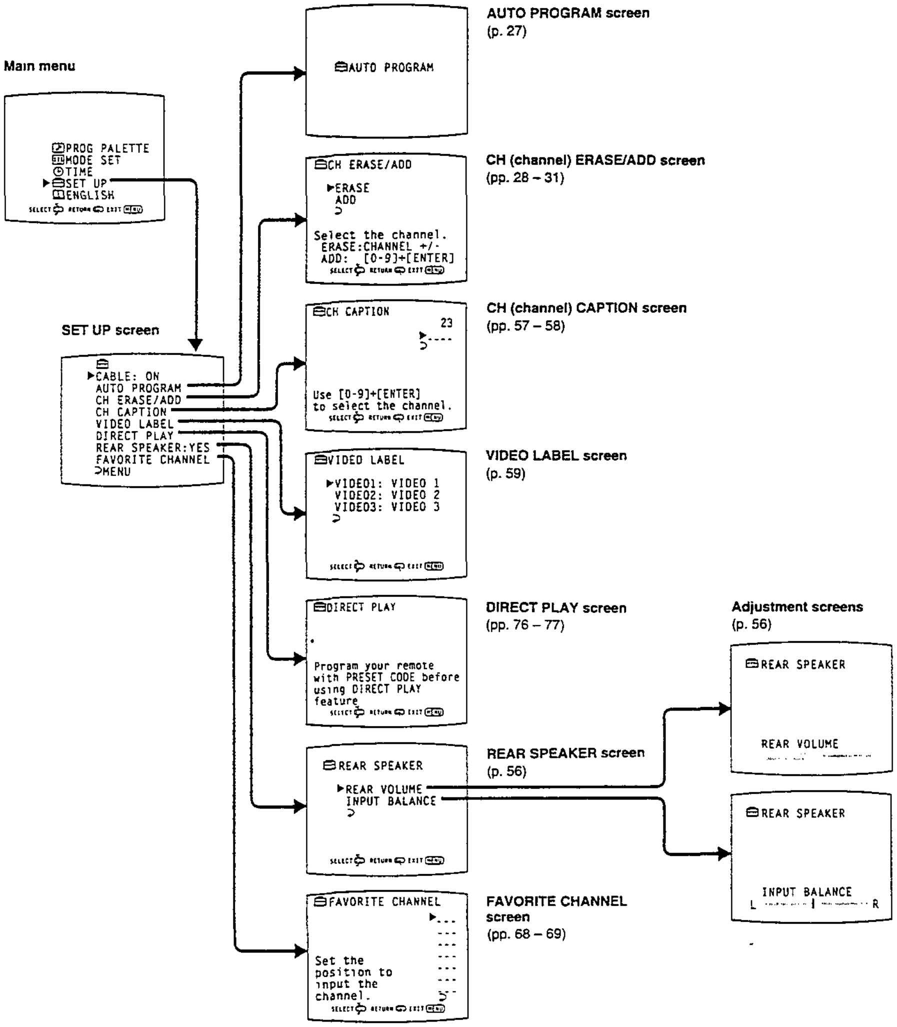
ON/OFF TIMER screen
(pp. 63 – 64)

```
ON/OFF TIMER
▶1.------
  -----AM  H CH...
 2.------
  -----AM  H CH...
 3.------
  -----AM  H CH...
Select a program.
```

CHANNEL BLOCK screen
(pp. 66 – 67)

```
CHANNEL BLOCK
▶.-----
 -----AM  H CH...
```

For presetting and other functions



Main menu

```
 PROG PALETTE
 MODE SET
 TIME
▶SET UP
 ENGLISH
```

SET UP screen

```
▶CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION
 VIDEO LABEL
 DIRECT PLAY
 REAR SPEAKER:YES
 FAVORITE CHANNEL
 MENU
```

AUTO PROGRAM screen
(p. 27)

```
AUTO PROGRAM
```

CH (channel) ERASE/ADD screen
(pp. 28 – 31)

```
CH ERASE/ADD
▶ERASE
 ADD

Select the channel.
 ERASE:CHANNEL +/-
 ADD:  [0-9]+[ENTER]
```

CH (channel) CAPTION screen
(pp. 57 – 58)

```
CH CAPTION
                  23
                ▶----

Use [0-9]+[ENTER]
to select the channel.
```

VIDEO LABEL screen
(p. 59)

```
VIDEO LABEL
▶VIDEO1: VIDEO 1
 VIDEO2: VIDEO 2
 VIDEO3: VIDEO 3
```

DIRECT PLAY screen
(pp. 76 – 77)

```
DIRECT PLAY

Program your remote
with PRESET CODE before
using DIRECT PLAY
feature
```

REAR SPEAKER screen
(p. 56)

```
REAR SPEAKER
▶REAR VOLUME
 INPUT BALANCE
```

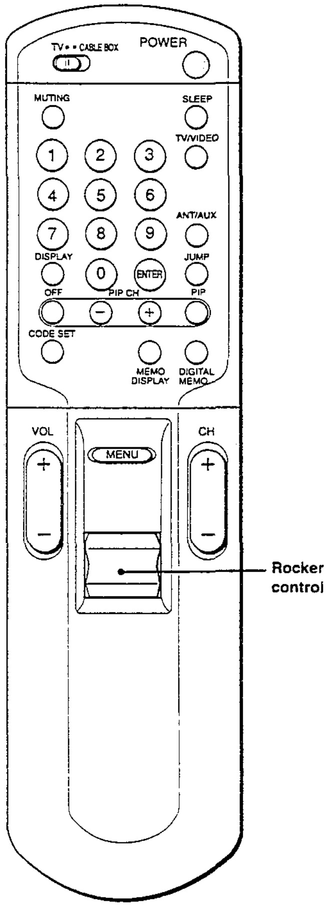
Adjustment screens
(p. 56)

```
REAR SPEAKER

REAR VOLUME
```

```
REAR SPEAKER

INPUT BALANCE
L               R
```

FAVORITE CHANNEL screen
(pp. 68 – 69)

```
FAVORITE CHANNEL
                ▶...
                 ---
                 ---
Set the          ---
position to      ---
input the        ---
channel.
```


TV • • CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
7
8
9
ANT/AUX
DISPLAY
0
ENTER
JUMP
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
CH
MENU
Rocker control

Navigating through the menus

To display the main menu
Press MENU.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

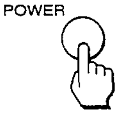
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

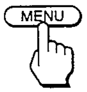
Changing the menu language

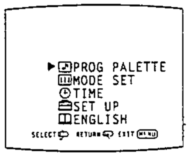
The menu language is factory-set to ENGLISH. Follow these instructions to change the menu language to Spanish or French, or back to English.

1 Press POWER to turn on the TV.
The TIMER/STAND BY indicator flashes until the picture appears.

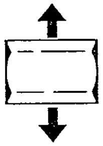


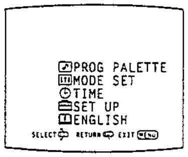
2 Press MENU.
The main menu appears.



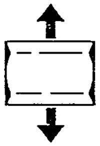

▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

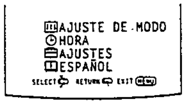
3 Press the rocker control up or down until the cursor points to "ENGLISH." Then click the rocker control.
The language display turns red.

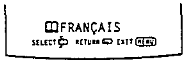


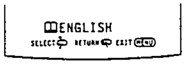

PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

4 Press the rocker control up or down to select the language.
Each time you press the rocker control up or down, the "ESPAÑOL," "FRANÇAIS" and "ENGLISH" menus appear.



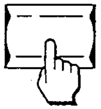

AJUSTE DE MODO
HORA
AJUSTES
ESPAÑOL
SELECT RETURN EXIT MENU

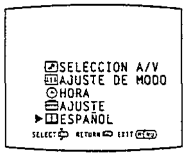

FRANÇAIS
SELECT RETURN EXIT MENU


ENGLISH
SELECT RETURN EXIT MENU

Note
Certain parts of the "ESPAÑOL" and "FRANÇAIS" menus remain in English.

5 Click the rocker control.
The language is selected.



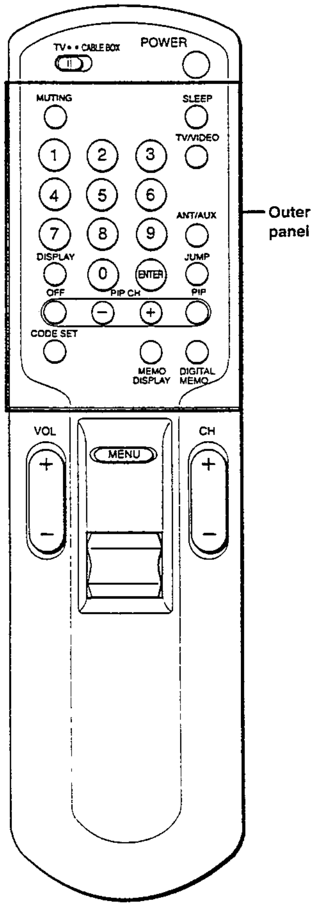

SELECCION A/V
AJUSTE DE MODO
HORA
AJUSTE
▶ESPAÑOL
SELECT RETURN EXIT MENU

Spanish menu

To return to the normal screen.
Press MENU on the Remote Commander.

Notes concerning menus
- During PIP (Picture-in-Picture) mode, the on-screen menus may overlap the window picture.
- The menus disappear automatically, if you do not press a button within 90 seconds.

Setting CABLE ON or OFF



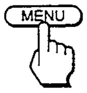
TV•• CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
ANT/AUX
7
8
9
DISPLAY
JUMP
0
ENTER
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
CH
MENU
Outer panel

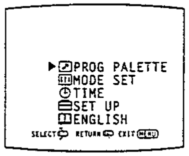
If you have cable connected to the TV, follow the steps below to set the cable connection on or off. Set CABLE OFF to preset or watch VHF or UHF channels, and set CABLE ON to preset or watch cable TV channels.

Note

If the TV is in video mode, the "CABLE" display is shaded and cannot be selected. Press TV/VIDEO to change to TV mode.

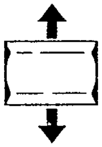
1 Press MENU.
The main menu appears.

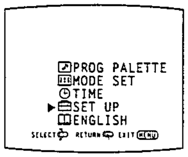




▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

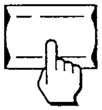
2 Press the rocker control up or down until the cursor points to "SET UP."

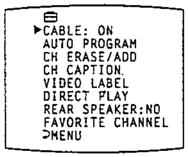




PROG PALETTE
MODE SET
TIME
▶SET UP
ENGLISH
SELECT RETURN EXIT MENU

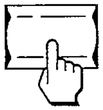
3 Click the rocker control.
The set up menu appears, and the cursor points to "CABLE."

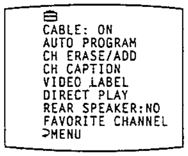




▶CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
⊃MENU

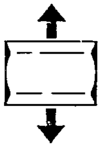
4 Click the rocker control again.
The mode display turns red.

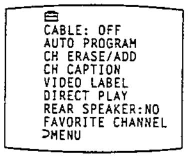




CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
⊃MENU

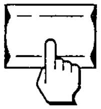
5 Press the rocker control up or down to select "ON" or "OFF."

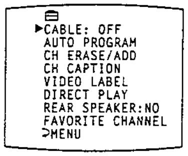




CABLE: OFF
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
⊃MENU

6 Click the rocker control.
The setting is complete.





▶CABLE: OFF
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
⊃MENU

To return to the previous menu

Press the rocker control up or down until the cursor points to "⊃ MENU." Then click the rocker control.

To return to the main menu

Repeat the above, until you reach the main menu.

To return to the normal screen.

Press MENU on the Remote Commander.

Cable TV channel chart*

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to the chart below.

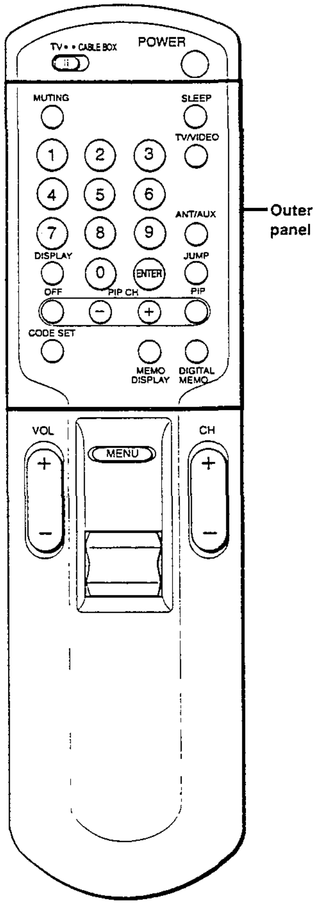
Number on this TV	Corresponding CATV channel
1	A-8
5	A-7
6	A-6
14	A
15	B
16	C
17	D
18	E
19	F
20	G
21	H
22	I
23	J
24	K
25	L
26	M
27	N
28	O
29	P
30	Q
31	R
32	S
33	T
34	U
35	V
36	W
37	W+1
38	W+2
39	W+3
⋮	⋮
93	W+57
94	W+58
95	A–5
96	A–4
97	A–3
98	A–2
99	A–1
100	W+59
101	W+60
102	W+61
⋮	⋮
123	W+82
124	W+83
125	W+84

Check with your local cable TV company for more complete information on the available channels.

* The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

Presetting TV Channels

By presetting TV channels to the TV, you can select channels by pressing CH (CHANNEL) +/–
(You can select VHF channels 2 – 13 without presetting.)



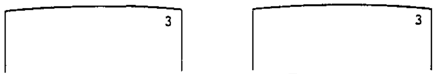
Presetting all receivable channels automatically

Follow these instructions to preset all the receivable VHF, UHF or cable TV channels to the TV.

Notes

- If the TV is in video mode, the "AUTO PROGRAM" display is shaded and cannot be selected. Press TV/VIDEO to change to TV mode.
- Perform auto programming during the day rather than late at night, when some channels may not be broadcasting.

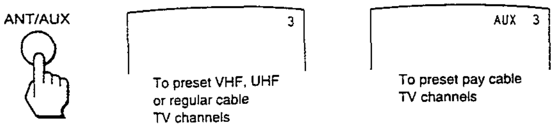
1 Set the cable connection on or off (pp. 24 – 25) to select the type of channel you want to preset, VHF/UHF or cable TV.



To preset VHF or UHF channels

To preset cable TV channels

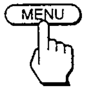
Press ANT/AUX to select the type of channel you want to preset, VHF/UHF/regular cable TV, or pay cable TV connected to the AUX (auxiliary) terminal.

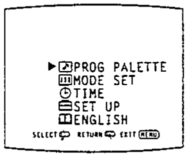


To preset VHF, UHF or regular cable TV channels

To preset pay cable TV channels

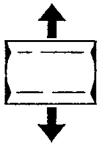
2 Press MENU.
The main menu appears.

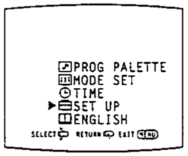




```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
SELECT RETURN EXIT MENU
```

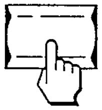
3 Press the rocker control up or down until the cursor points to "SET UP"

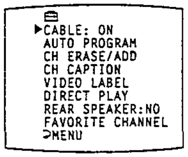




```
 PROG PALETTE
 MODE SET
 TIME
▶SET UP
 ENGLISH
SELECT RETURN EXIT MENU
```

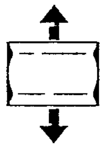
4 Click the rocker control.
The set up menu appears.

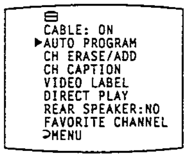




```
▶CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION
 VIDEO LABEL
 DIRECT PLAY
 REAR SPEAKER:NO
 FAVORITE CHANNEL
 ⊃MENU
```

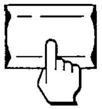
5 Press the rocker control up or down until the cursor points to "AUTO PROGRAM."

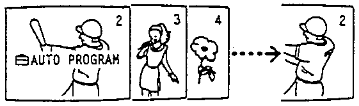




```
 CABLE: ON
▶AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION
 VIDEO LABEL
 DIRECT PLAY
 REAR SPEAKER:NO
 FAVORITE CHANNEL
 ⊃MENU
```

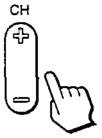
6 Click the rocker control.

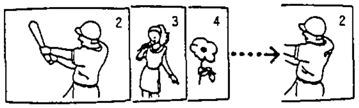




"AUTO PROGRAM" appears on the screen and receivable channels (other than the channels already preset) are preset in numerical sequence. The channels previously preset will not remain in the TV's memory.
When no more channels are found, auto programming stops and the screen returns automatically to the set up menu.

7 Press CH +/– to check or view the preset channels.





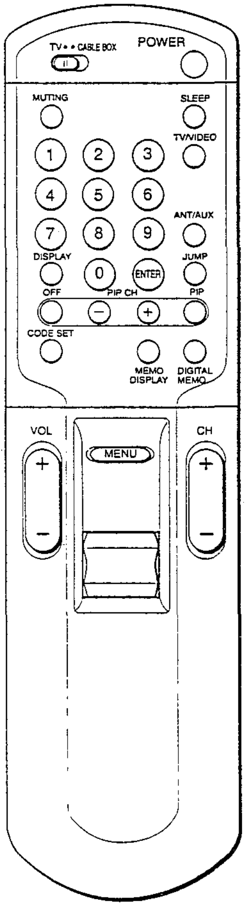
Receivable channels for this TV
VHF: 2 – 13
UHF: 14 – 69
Cable: 1 – 125

To select TV channels without presetting
Press the 0 – 9 buttons and ENTER.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

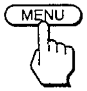
To return to the normal screen.
Press MENU on the Remote Commander.

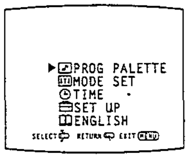

TV • • CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
ANT/AUX
7
8
9
DISPLAY
JUMP
0
ENTER
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
MENU
CH

Erasing TV channels

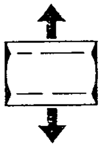
Follow these instructions to erase unnecessary TV channels, so that when you press CH +/–, the channel(s) are skipped.

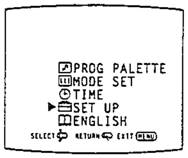
1 Press MENU.
The main menu appears.



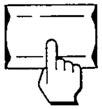

▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

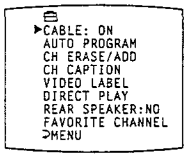
2 Press the rocker control up or down until the cursor points to "SET UP."



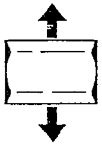

PROG PALETTE
MODE SET
TIME
▶SET UP
ENGLISH
SELECT RETURN EXIT MENU

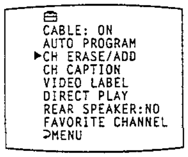
3 Click the rocker control.
The set up menu appears.



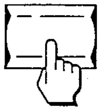

▶CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
⊃MENU

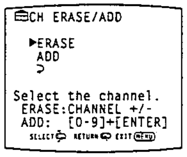
4 Press the rocker control up or down until the cursor points to "CH ERASE/ADD."



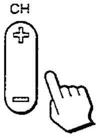

CABLE: ON
AUTO PROGRAM
▶CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
⊃MENU

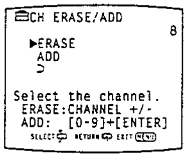
5 Click the rocker control.
The CH ERASE/ADD screen appears, and the cursor points to "ERASE."



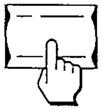

CH ERASE/ADD
▶ERASE
ADD
⊃
Select the channel.
ERASE:CHANNEL +/-
ADD: [0-9]+[ENTER]
SELECT RETURN EXIT MENU

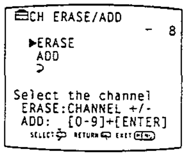
6 Press CH +/– to select the channel you want to erase.
The channel display appears.




CH ERASE/ADD
8
▶ERASE
ADD
⊃
Select the channel.
ERASE:CHANNEL +/-
ADD: [0-9]+[ENTER]
SELECT RETURN EXIT MENU

7 Click the rocker control.
A "–" sign appears in front of the channel number display, indicating that the channel is erased; then the CH ERASE/ADD screen automatically reappears.




CH ERASE/ADD
- 8
▶ERASE
ADD
⊃
Select the channel
ERASE:CHANNEL +/-
ADD: [0-9]+[ENTER]
SELECT RETURN EXIT MENU

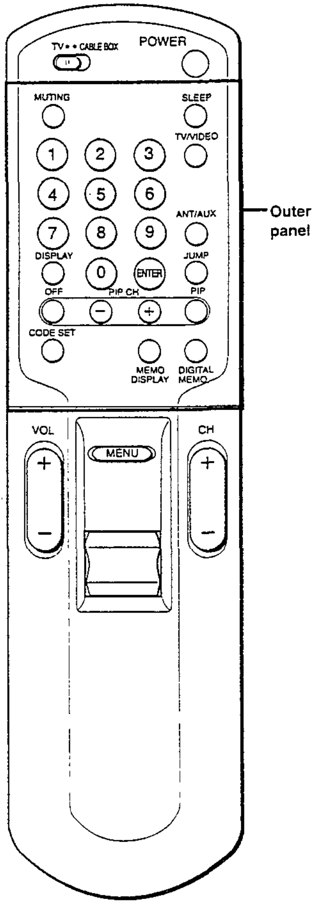
To erase another channel
Repeat steps 6 – 7.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

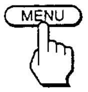
Note
If you erase a VHF or UHF channel, the same number cable TV channel is also erased (and vice versa).

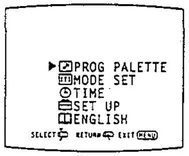


Adding TV channels

Follow these instructions to add TV channels one by one to the selection memory, or to replace a TV channel you previously erased (pp. 28 – 29).

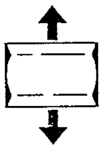
1 Press MENU.
The main menu appears.

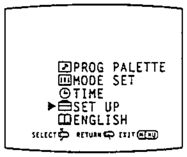




```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
SELECT⇕ RETURN⇦ EXIT MENU
```

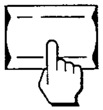
2 Press the rocker control up or down until the cursor points to "SET UP "

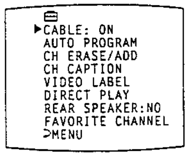




```
 PROG PALETTE
 MODE SET
 TIME
▶SET UP
 ENGLISH
SELECT⇕ RETURN⇦ EXIT MENU
```

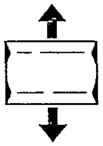
3 Click the rocker control.
The set up menu appears.

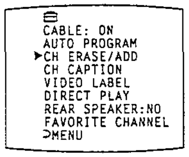




```
▶CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION
 VIDEO LABEL
 DIRECT PLAY
 REAR SPEAKER:NO
 FAVORITE CHANNEL
 ⊃MENU
```

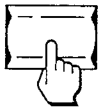
4 Press the rocker control up or down until the cursor points to "CH ERASE/ADD."

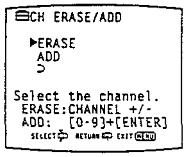




```
 CABLE: ON
 AUTO PROGRAM
▶CH ERASE/ADD
 CH CAPTION
 VIDEO LABEL
 DIRECT PLAY
 REAR SPEAKER:NO
 FAVORITE CHANNEL
 ⊃MENU
```

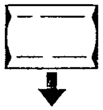
5 Click the rocker control.
The CH ERASE/ADD screen appears.

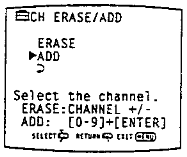




```
CH ERASE/ADD
 ▶ERASE
  ADD
  ⊃
Select the channel.
 ERASE:CHANNEL +/-
 ADD:  [0-9]+[ENTER]
SELECT⇕ RETURN⇦ EXIT MENU
```

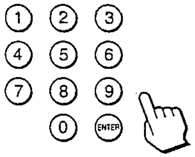
6 Press the rocker control down until the cursor points to "ADD."

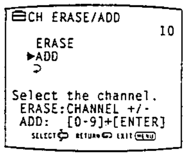




```
CH ERASE/ADD
  ERASE
 ▶ADD
  ⊃
Select the channel.
 ERASE:CHANNEL +/-
 ADD:  [0-9]+[ENTER]
SELECT⇕ RETURN⇦ EXIT MENU
```

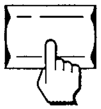
7 Press 0 – 9 and ENTER on the Remote Commander to select the channel you want to add.
The channel display appears.

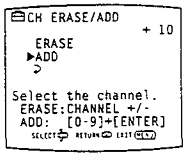




```
CH ERASE/ADD
                    10
  ERASE
 ▶ADD
  ⊃
Select the channel.
 ERASE:CHANNEL +/-
 ADD:  [0-9]+[ENTER]
SELECT⇕ RETURN⇦ EXIT MENU
```

8 Click the rocker control.
A "+" sign appears in front of the channel number display, indicating that the channel is added; then the CH ERASE/ADD screen automatically reappears.





```
CH ERASE/ADD
                  + 10
  ERASE
 ▶ADD
  ⊃
Select the channel.
 ERASE:CHANNEL +/-
 ADD:  [0-9]+[ENTER]
SELECT⇕ RETURN⇦ EXIT MENU
```

To add another channel
Repeat steps 7 – 8.

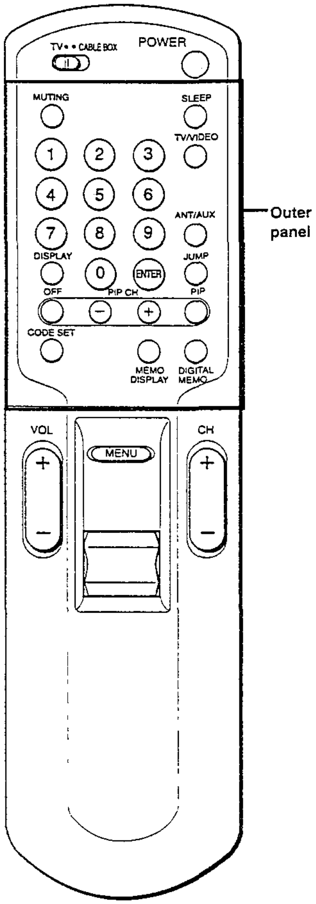
To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Note
If you add a VHF or UHF channel, the same number cable TV channel is also added (and vice versa).

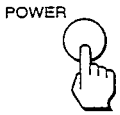
Watching TV Programs


TV CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
ANT/AUX
7
8
9
DISPLAY
JUMP
0
ENTER
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
CH
MENU
Outer panel

Make sure that the TV/CABLE BOX selector on the Remote Commander is set to TV, in order to control the TV with the Remote Commander.

1 Press POWER to turn on the TV.

The TIMER/STAND BY indicator flashes until the picture appears.

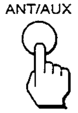


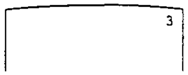
2 Set the cable connection on or off (pp. 24 – 25) to select the type of channel you want to watch, VHF/UHF or cable TV.

To watch VHF or UHF channels

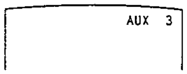
To watch cable TV channels

Press ANT/AUX to select the type of channel you want to watch, VHF/UHF/ regular cable TV, or pay cable TV connected to the AUX (auxiliary) terminal.





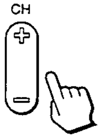
To watch VHF, UHF or regular cable TV channels



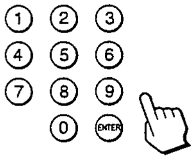
To watch pay cable TV channels

3 Select a channel in one of the following two ways:

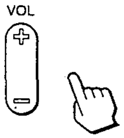
To scan the preset channels in numerical sequence, press CH +/–



To select a channel directly, press 0 – 9 and then ENTER.
For example, to select channel 10, press 1, 0 and ENTER.


1
2
3
4
5
6
7
8
9
0
ENTER

4 Press VOL +/– to adjust the volume.



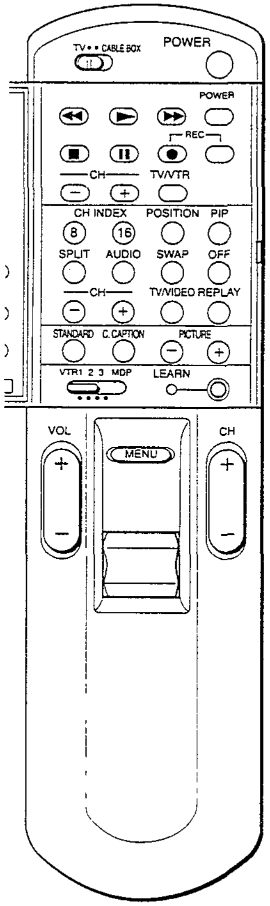
Press + to increase the volume.
Press – to decrease the volume.

If VIDEO 1, VIDEO 2 or VIDEO 3 appears on the screen
Press TV/VIDEO until a TV channel number appears.

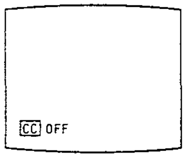
To select channels more easily
Set FAVORITE CHANNEL (pp. 70 – 71).

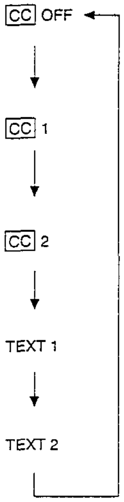
To turn off the TV
Press POWER.

Using Closed Caption


TV • • CABLE BOX
POWER
POWER
REC
CH
TV/VTR
CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN
VOL
MENU
CH

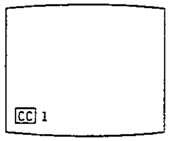
1 Press C.CAPTION.
The closed caption mode appears. CC1, CC2, TEXT1, TEXT2 or CC OFF appears in sequence each time you press C.CAPTION.



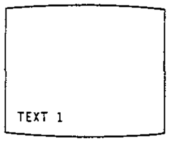

CC OFF
CC 1
CC 2
TEXT 1
TEXT 2

2 Press C.CAPTION repeatedly.

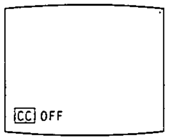
Select CC1 or CC2 to view Captions.
A Caption is a printed version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.)



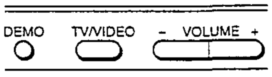
Select TEXT1 or TEXT2 to view Text.
Text is information that is presented using the half to full television screen. It is usually not related to the program.



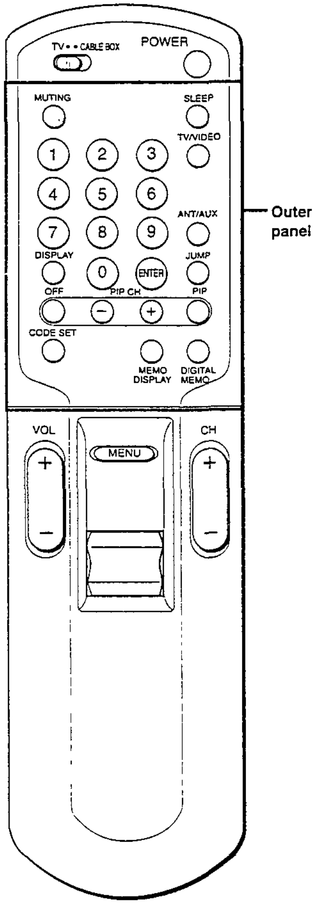
Select CC OFF if you don't want to view Closed Caption nor Text.



Using Convenient Features


DEMO
TV/VIDEO
- VOLUME +

Front of TV


TV • • CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
ANT/AUX
7
8
9
DISPLAY
JUMP
0
ENTER
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
CH
MENU
Outer panel

Muting the sound — MUTING

Press MUTING.
"MUTING" appears on the screen.

To restore the sound
Press MUTING again, or press VOL +.

Keeping the displays on-screen — DISPLAY

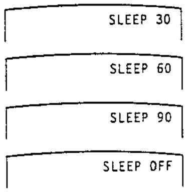
Press DISPLAY.
All the existing displays appear: channel number, channel caption (if set), MTS mode ("SAP" only), window picture input mode, and the current time ("AM" or "PM" disappears after about three seconds).

To turn off the displays
Press DISPLAY again.

Setting the sleep timer — SLEEP

The sleep timer turns off the TV automatically after the amount of time you select.

Press SLEEP
Each time you press SLEEP, the time increments "30," "60," "90" and "OFF" mode appear in sequence.



SLEEP 30

SLEEP 60

SLEEP 90

SLEEP OFF

A red "SLEEP" display appears about one minute before the TV goes off.

To cancel the setting.
Press SLEEP until OFF mode appears.
A green "SLEEP OFF" display appears for about three seconds.
OR
Turn the TV off.
The sleep timer setting is cancelled.

Switching quickly between two channels — JUMP

Use this function to keep track of two programs alternately.

To recall the channel you were watching previously
Press JUMP

To switch back to the first channel
Press JUMP again.

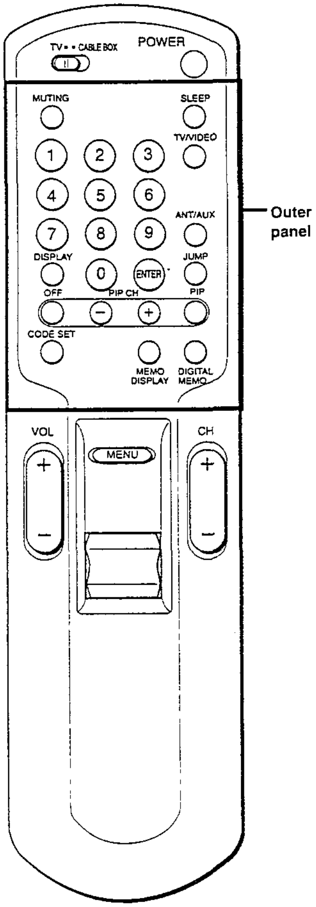
Note
The JUMP function also changes the mode to ANT (antenna) or AUX (auxiliary), depending on the mode of the channel you were watching previously.

Previewing the features — DEMO

Press DEMO.
Functions and menus are displayed one by one.

To restart DEMO from the beginning
Press DEMO again.

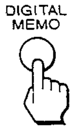
To stop DEMO
Press any button.


TV • • CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
ANT/AUX
7
8
9
DISPLAY
JUMP
0
ENTER
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
CH
MENU
Outer panel

Storing an image in memory – DIGITAL MEMO

Use this feature to store and recall a recipe from a cooking program, a displayed address or phone number and so on.

1 Press DIGITAL MEMO.
The displayed image is stored in memory, and the image remains still on the screen.


DIGITAL MEMO

2 Press MEMO DISPLAY.
The TV returns to normal viewing mode.

MEMO DISPLAY

To recall the stored image

Press MEMO DISPLAY.

MEMO DISPLAY

The stored picture is retained in memory until:
- you turn off the TV.
- you press OFF (in the PIP section) twice.
- you store a different image.

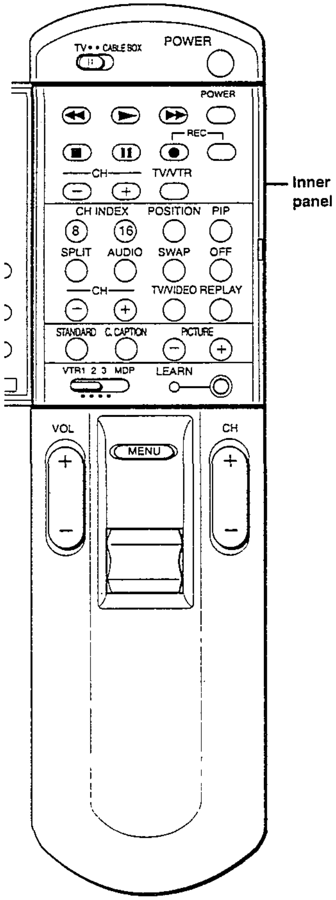
To return to the normal screen
Press MEMO DISPLAY again.

Note
You cannot display a window picture (pp. 41 – 45) while viewing a DIGITAL MEMO screen.

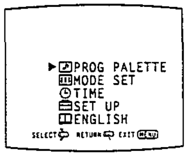
Selecting a Picture and Sound Mode →

This TV features six modes (STANDARD, MOVIE, SPORTS, NEWS, MUSIC, GAME) that offer different picture and sound qualities. Choose the one that best suits the type of program that you want to watch.

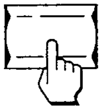
Example: Select MOVIE mode for picture and sound that gives you the sense of being in a movie theater.

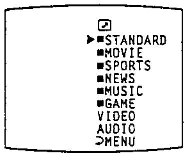

TV • • CABLE BOX
POWER
POWER
REC
CH
TV/VTR
CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN
VOL
CH
MENU
Inner panel

1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."

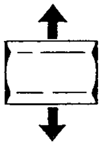

▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT

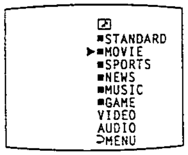
2 Click the rocker control.
The program palette menu appears.



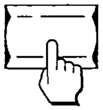

▶■STANDARD
■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
MENU

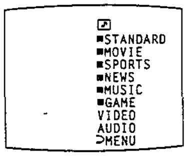
3 Press the rocker control up or down until the cursor points to "MOVIE."




■STANDARD
▶■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
MENU

4 Click the rocker control.
The "MOVIE" display turns green, indicating that MOVIE mode is selected.




■STANDARD
■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
MENU

To select a different mode
Repeat steps 3 – 4.

Selecting standard mode (without using the menus)

Follow these instructions to select standard mode without using the on-screen menus.

Press STANDARD.

STANDARD

When you select STANDARD mode
You receive standard picture and sound quality. Any video or audio adjustments you made ("Adjusting the Picture" pp. 46 – 50; "Adjusting the Sound" pp. 51 – 56) are cancelled and the original factory settings are restored.

When you select MOVIE mode
You receive a finely detailed picture, and a theatrical audio effect.
To further adjust picture and sound qualities, follow the instructions on pp. 46 – 50 and pp. 51 – 56, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 51 – 52).

When you select SPORTS mode
You receive a vivid, bright picture, and sound with a sports stadium effect.
To further adjust picture and sound qualities, follow the instructions on pp. 46 – 50 and pp. 51 – 56, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 51 – 52).

When you select NEWS mode
Picture noise is reduced, and you receive clear voice reproduction.
To further adjust picture and sound qualities, follow the instructions on pp. 46 – 50 and pp. 51 – 56, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 51 – 52).

When you select MUSIC mode
You receive a warmer picture, and live concert effect sound.
To further adjust picture and sound qualities, follow the instructions on pp. 46 – 50 and pp. 51 – 56, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 51 – 52).

When you select GAME mode
The picture is easier on your eyes, and sound has a surround effect.
To further adjust picture and sound qualities, follow the instructions on pp. 46 – 50 and pp. 51 – 56, or select different sound modes from the DSP (Digital Sound Processor) menu (pp. 51 – 52).

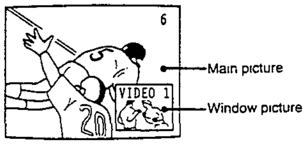
To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

Watching Two or More Pictures at Once (PIP)

You can watch both the main picture and one or more window pictures simultaneously, using the Picture-in-Picture (PIP) function.



Picture-in-Picture special features
When watching the main picture and a window picture, you can:

- Choose the sound from the main or window picture (AUDIO).
- Change the position of the window picture (POSITION).
- Swap the main and window pictures (SWAP).
- Replay the main picture as a window picture (REPLAY).
- Split the screen, with the main picture on one side and the window picture on the other side (SPLIT).
- Display 8 or 16 TV channels simultaneously (CH INDEX 8/16).

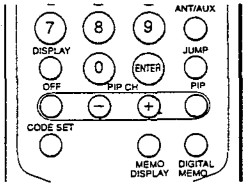
Notes

- You can also use the CH +/– buttons on the Remote Commander's inner panel.
- The video label and channel caption will not appear with the window picture even if you have set them.
- If you select a blocked channel in the window picture, the display "BLOCKED" appears with the window picture. (See "Setting CHANNEL BLOCK," pp. 66 – 67.)
- If you display a DIGITAL MEMO screen (p. 38), the window picture disappears.

Displaying a window picture

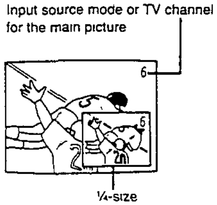
To turn PIP mode on or off, or to change TV channels, you can use the PIP buttons on the Remote Commander's outer panel. For other PIP functions, use the inner panel controls, which also include the PIP, OFF and CH +/– buttons.

Remote Commander (Outer panel)

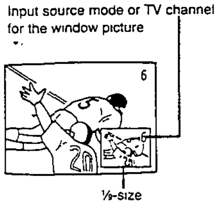


Press PIP to display a window picture

PIP


Input source mode or TV channel for the main picture
6
6
¼-size

PIP


Input source mode or TV channel for the window picture
6
6
⅑-size

A window picture appears in the last mode you watched.
Each time you press PIP, a 1/4 or 1/9 size window picture appears alternately.

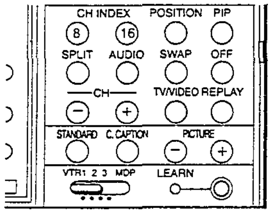
To turn PIP function off
Press OFF
The window picture disappears.

To change TV channels in the window picture
Press TV/VIDEO to select TV mode; then press CH +/– in the PIP control area.

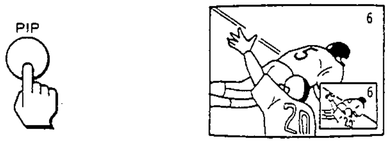
Changing the window picture input mode

Follow these instructions to select the input mode (TV/ VIDEO 1, VIDEO 2, VIDEO 3) for the window picture.

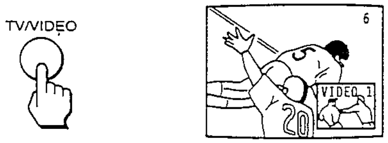
Remote Commander (inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

1 Press PIP to display a window picture.



2 Press TV/VIDEO to select the input mode.
Each time you press TV/VIDEO, "TV," "VIDEO 1," "VIDEO 2" and "VIDEO 3" appear in sequence.


TV/VIDEO
6
VIDEO 1

To receive the window picture sound
Press AUDIO.

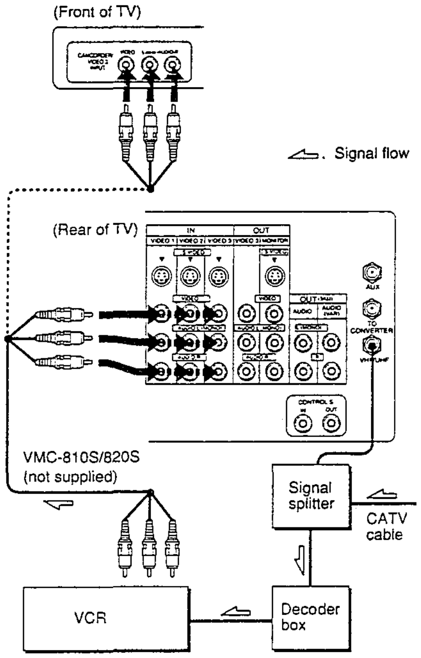
The ♪ display appears for a few seconds, indicating that the window picture sound is being received.

To restore the main picture sound
Press AUDIO again.

Note
The window picture sound is also output from the AUDIO (VAR) OUT jacks. The AUDIO OUT and MONITOR OUT jacks output the main picture sound only.

Displaying CATV input as a window picture

To use Picture-in-Picture with pay cable TV input, make the connections to your cable converter box as shown below.


(Front of TV)
Signal flow
(Rear of TV)
IN
OUT
AUX
TO CONVERTER
VHF/UHF
VMC-810S/820S
(not supplied)
Signal splitter
CATV cable
VCR
Decoder box

After making the above connections, turn the cable connection on by following the steps on pp. 24 – 25; then continue with the steps below.

1–2 Follow steps 1 – 2 in "Changing the window picture input mode" on this page to select the video input mode for your connected VCR.

3 Put your VCR on an inactive channel (channel 3 or 4).

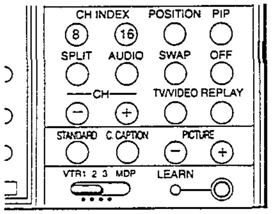
4 Change pay cable TV channels with the decoder box.

To control your cable converter box with the supplied Remote Commander
See p. 74.

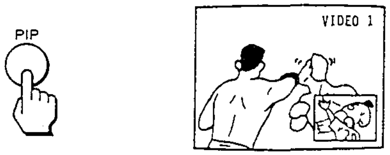
Changing the position of the window picture

Follow these instructions to change the position of the window picture on the screen.

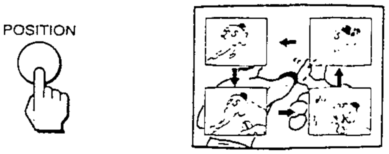
Remote Commander (inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

1 Press PIP to display a window picture.



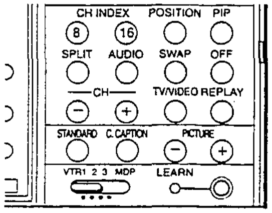
2 Press POSITION.
Each time you press POSITION, the window picture moves as illustrated.



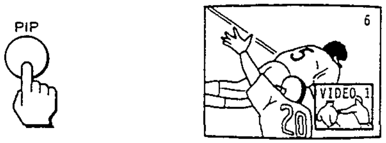
Swapping the main and window pictures

Follow these instructions to swap the input signals of the main and window pictures.

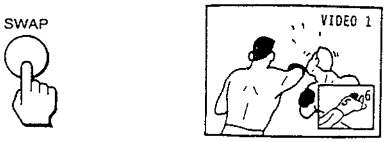
Remote Commander (inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

1 Press PIP to display a window picture.


PIP
6
VIDEO 1

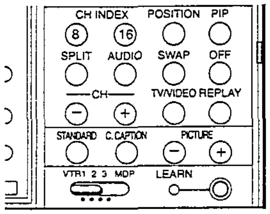
2 Press SWAP
Each time you press SWAP, the images from the main and window pictures switch places.


SWAP
VIDEO 1
6

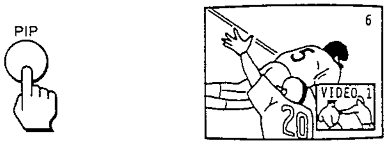
Displaying 8 TV channels at once – CH INDEX 8

Follow these instructions to display the main picture and 7 window pictures at once.

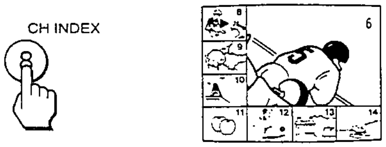
Remote Commander (Inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

1 Press PIP to display a window picture.


PIP
6
VIDEO 1

2 Press CH INDEX 8 to display seven window pictures.
Seven TV channels appear in numerical sequence, as window pictures.

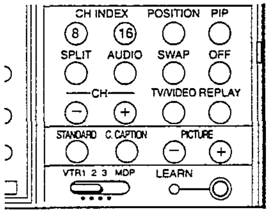

CH INDEX
8
6
9
10
11
12
13
14

Each time you press CH INDEX 8, the next seven sequential channels appear (the main picture does not change).

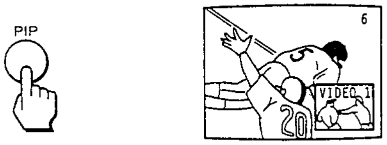
To return to the normal screen
Press OFF

Displaying 16 TV channels at once – CH INDEX 16

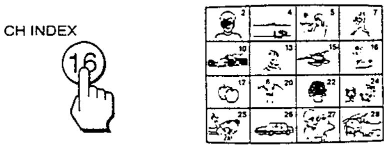
Follow these instructions to display 16 window pictures at once.
Remote Commander (Inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

1 Press PIP to display a window picture.


PIP
6
VIDEO 1

2 Press CH INDEX 16 to display 16 window pictures.
16 TV channels appear in numerical sequence, as window pictures.



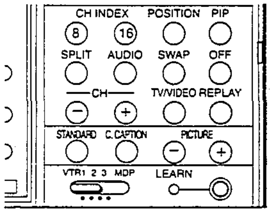
Each time you press CH INDEX 16, the next 16 sequential channels appear (the main picture does not change).

To return to the normal screen
Press OFF

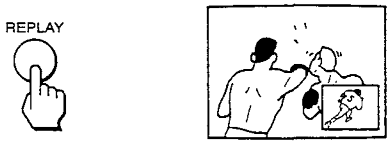
Replaying the main picture as a window picture

Follow these instructions to replay the image that appeared in the main picture two seconds before, as a window picture.

Remote Commander (Inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

Press REPLAY.

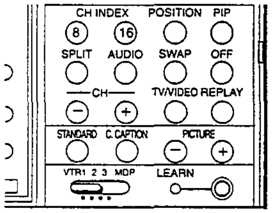


To return to the normal screen
Press OFF

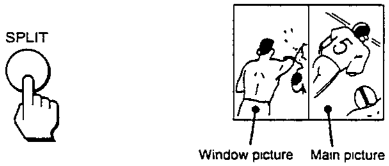
Splitting the screen

Follow these instructions to split the screen, with the window picture on the left, and the main picture on the right.

Remote Commander (Inner panel)


CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

Press SPLIT.


SPLIT
Window picture
Main picture

To return to the normal screen
Press OFF

Note
When using SPLIT, vertical lines may appear elongated.

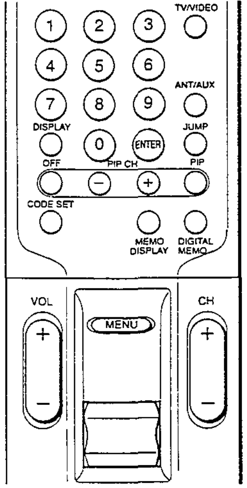
Adjusting the Picture

You can adjust the picture (and sound, pp. 51 – 54) for each input mode (TV, VIDEO 1, VIDEO 2, VIDEO 3) by pressing TV/VIDEO on the TV or on the Remote Commander to select the input mode, before making the adjustments. These adjustments are retained in memory even when you turn off the TV, but are cancelled after you change the adjustments, or select a picture and sound mode (pp. 39 – 40).

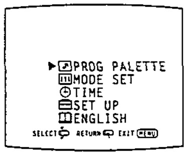
Adjusting picture quality

Follow these instructions to adjust PICTURE, HUE, COLOR, BRIGHT (brightness) and SHARP (sharpness).

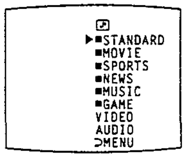
Remote Commander (Outer panel)



1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."

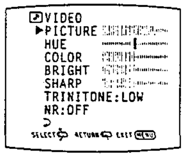

▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

2 Click the rocker control.
The program palette menu appears.


▶STANDARD
MOVIE
SPORTS
NEWS
MUSIC
GAME
VIDEO
AUDIO
⊃MENU

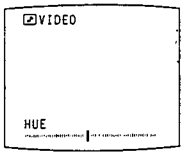
3 Press the rocker control up or down until the cursor points to "VIDEO."

4 Click the rocker control.
The VIDEO screen appears.


VIDEO
▶PICTURE
HUE
COLOR
BRIGHT
SHARP
TRINITONE:LOW
NR:OFF
⊃
SELECT RETURN EXIT MENU

5 Press the rocker control up or down until the cursor points to the item you want to adjust.

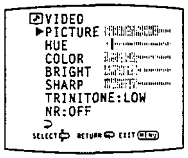
6 Click the rocker control.
The adjustment screen appears.


VIDEO
HUE

7 Press the rocker control up or down to make the adjustment.

Picture quality	Press the rocker control down	Press the rocker control up
PICTURE	For decreased picture contrast with soft color	For increased picture with vivid color
HUE	Skin tones become purplish	Skin tones become greenish
COLOR	For less color intensity	For more color intensity
BRIGHT	For less brightness	For more brightness
SHARP	For less sharpness	For more sharpness

8 Click the rocker control.
The adjustment is complete, and the VIDEO screen automatically reappears.

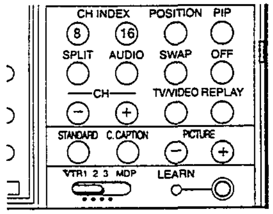

VIDEO
▶PICTURE
HUE
COLOR
BRIGHT
SHARP
TRINITONE:LOW
NR:OFF
⊃
SELECT RETURN EXIT MENU

To adjust other items
Repeat steps 5 – 8.

To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control;
or, press STANDARD on the Remote Commander.
All the items, including TRINITONE (p. 48) and NR (p. 49) return to their original factory settings.

To adjust picture contrast
You can also adjust picture contrast with the PICTURE +/– buttons on the Remote Commander.

(Inner panel)



Press + to increase picture contrast with vivid color.
Press – to decrease picture contrast with soft color.
The picture adjustment screen appears.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

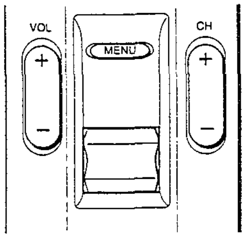
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

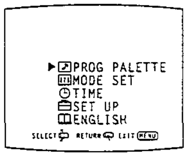
Setting the TRINITONE mode

Color picture tubes are usually manufactured with a fixed color temperature (tint) that determines the "warmth" (red tint) or "coolness" (blue tint) of the picture. Use the Sony Trinitone feature to adjust the picture color to your preference.

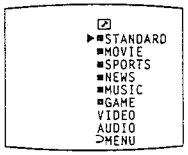
Remote Commander



1. Press MENU.
   The main menu appears, and the cursor points to "PROG PALETTE."

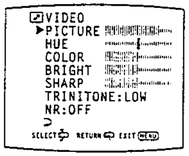

▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

2. Click the rocker control.
   The program palette menu appears.


▶■STANDARD
■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
⊃MENU

3. Press the rocker control up or down until the cursor points to "VIDEO."

4. Click the rocker control.
   The VIDEO screen appears.


VIDEO
▶PICTURE
HUE
COLOR
BRIGHT
SHARP
TRINITONE:LOW
NR:OFF
⊃
SELECT RETURN EXIT MENU

5. Press the rocker control up or down until the cursor points to "TRINITONE."

6. Click the rocker control.
   The mode display turns red.

7. Press the rocker control up or down to select "HIGH" or "LOW."

   Select "HIGH" to make the picture cool (bluish).
   Select "LOW" to make the picture warm (reddish).

8. Click the rocker control.
   The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

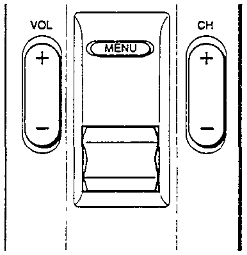
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

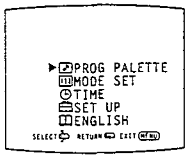
Setting NR (picture noise reduction) ON or OFF

Follow these instructions to reduce picture noise.

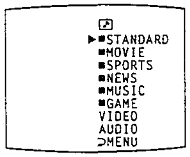
Remote Commander



1. Press MENU.
   The main menu appears, and the cursor points to "PROG PALETTE."

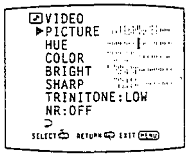

▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

2. Click the rocker control.
   The program palette menu appears.

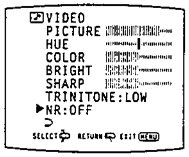

▶■STANDARD
■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
⊃MENU

3. Press the rocker control up or down until the cursor points to "VIDEO."

4. Click the rocker control.
   The VIDEO screen appears.


VIDEO
▶PICTURE
HUE
COLOR
BRIGHT
SHARP
TRINITONE:LOW
NR:OFF
⊃
SELECT RETURN EXIT MENU

5. Press the rocker control up or down until the cursor points to "NR."


VIDEO
PICTURE
HUE
COLOR
BRIGHT
SHARP
TRINITONE:LOW
▶NR:OFF
⊃
SELECT RETURN EXIT MENU

6. Click the rocker control.
   The mode display turns red.

7. Press the rocker control up or down to select "ON" or "OFF."

   Select "ON" to reduce picture noise.
   Select "OFF" to restore the normal picture.

8. Click the rocker control.
   The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

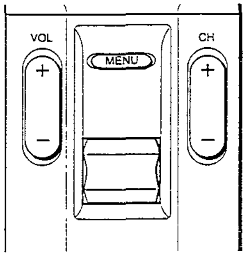
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

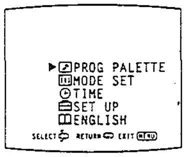
Setting S-VIDEO ON or OFF

Follow these instructions to set S-VIDEO on or off, depending on the kind of video equipment you have connected to the TV. For instructions on connecting video equipment, see pp. 15 – 18.

Remote Commander (Outer panel)

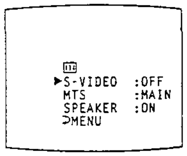


1 Press MENU.
The main menu appears.


▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

2 Press the rocker control up or down until the cursor points to "MODE SET."

3 Click the rocker control.
The mode set menu appears, with the cursor pointing to "S-VIDEO."



```
▶S-VIDEO  :OFF
 MTS      :MAIN
 SPEAKER  :ON
 ⊃MENU
```

4 Click the rocker control.
The mode display turns red.

5 Press the rocker control up or down to select "ON" or "OFF."

6 Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

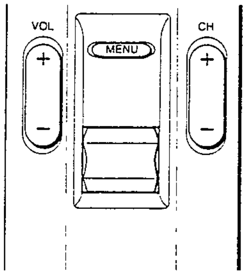
Adjusting the Sound

Selecting a sound mode

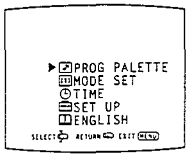
Use the DSP (Digital Sound Processor) menu to select the sound mode that best suits the type of sound you are listening to.

Example: Select JAZZ CLUB mode to enhance the effect when viewing a musical performance

Remote Commander

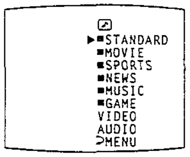


1 Press MENU.
The main menu appears


▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

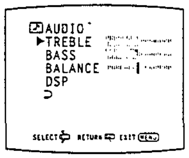
2 Press the rocker control up or down until the cursor points to "PROG PALETTE."

3 Click the rocker control.
The program palette menu appears.


▶■STANDARD
■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
⊃MENU

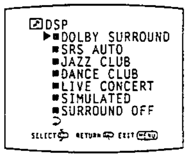
4 Press the rocker control up or down until the cursor points to "AUDIO."

5 Click the rocker control.
The AUDIO screen appears.


AUDIO
▶TREBLE
BASS
BALANCE
DSP
⊃
SELECT RETURN EXIT MENU

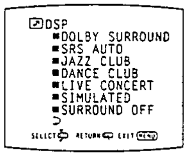
6 Press the rocker control up or down until the cursor points to "DSP."

7 Click the rocker control
The DSP menu appears.


DSP
▶■DOLBY SURROUND
■SRS AUTO
■JAZZ CLUB
■DANCE CLUB
■LIVE CONCERT
■SIMULATED
■SURROUND OFF
⊃
SELECT RETURN EXIT MENU

8 Press the rocker control up or down until the cursor points to "JAZZ CLUB."

9 Click the rocker control.
JAZZ CLUB mode is selected.


DSP
■DOLBY SURROUND
■SRS AUTO
■JAZZ CLUB
■DANCE CLUB
■LIVE CONCERT
■SIMULATED
■SURROUND OFF
⊃
SELECT RETURN EXIT MENU

To select a different mode
Repeat steps 8 – 9. (See the next page for the different modes you can choose.)

To further adjust the sound
Follow the instructions on pp. 53 – 54.

To return to the previous menu
Press A/V WINDOW +/– until the cursor points to " ⊃ MENU."
Then press RETURN.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

When you select DOLBY SURROUND* mode
You receive wraparound sound with three-dimensional** audio depth and presence when you connect main speakers and optional rear speakers.

Note
You must set REAR SPEAKER to "YES" (p. 56), or the display is blacked out and cannot be selected.
When using rear speakers, control the volume with the REAR VOLUME adjustment screen.

When you select SRS AUTO mode
You receive powerfully realistic sound that recaptures audio "clues" originally present but masked in the recording process, so that the action seems to happen all around you.

When you select JAZZ CLUB mode
You receive sound that gives a sense of space, with a touch of echo added.

When you select DANCE CLUB mode
You receive the sound effect of the hard floor and wall environment of a dance club.

When you select LIVE CONCERT mode
You receive sound that simulates the effect of being present at a live concert.

When you select SIMULATED mode
You receive monaural sound with a surround-like effect.

When you select SURROUND OFF mode
You receive sound without a surround effect.

To further adjust sound qualities
Follow the instructions on pp. 53 – 54.

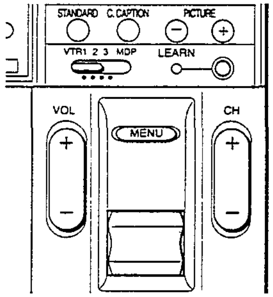
* Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877. "Dolby" and the double-D symbol ᗡᗞ are trademarks of Dolby Laboratories Licensing Corporation.

**Three-dimensional qualities apply to sound sources identified by the DOLBY SURROUND mark (ᗡᗞ).

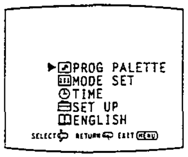
Adjusting sound quality

Follow these instructions to adjust the TREBLE, BASS and BALANCE.

Remote Commander (Inner panel)

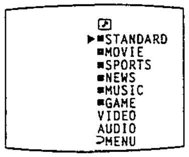


1 Press MENU.
The main menu appears, and the cursor points to "PROG PALETTE."



▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

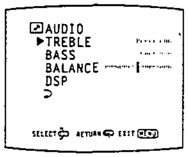
2 Click the rocker control.
The program palette menu appears.



▶■STANDARD
■MOVIE
■SPORTS
■NEWS
■MUSIC
■GAME
VIDEO
AUDIO
⊃MENU

3 Press the rocker control up or down until the cursor points to "AUDIO."

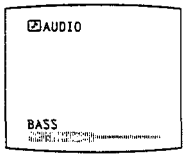
4 Click the rocker control.
The AUDIO screen appears.



AUDIO
▶TREBLE
BASS
BALANCE
DSP
⊃
SELECT RETURN EXIT MENU

5 Press the rocker control up or down until the cursor points to the item you want to adjust.

6 Click the rocker control.
The adjustment screen appears.

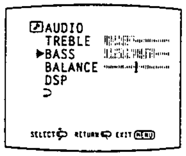


AUDIO
BASS

7 Press the rocker control up or down to make the adjustment.

Sound quality	Press the rocker control down	Press the rocker control up
TREBLE	To decrease the treble response	To increase the treble response
BASS	To decrease the bass response	To increase the bass response
BALANCE	To emphasize the left speaker's volume	To emphasize the right speaker's volume

8 Click the rocker control.
The adjustment is complete, and the AUDIO screen automatically reappears.



AUDIO
TREBLE
▶BASS
BALANCE
DSP
⊃
SELECT RETURN EXIT MENU

To adjust other items
Repeat steps 5 – 9.

To restore the factory settings for all the items
Select "STANDARD" on the program palette menu, and click the rocker control; or, press STANDARD on the Remote Commander.
All the items return to their original factory settings.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Selecting an MTS (Multichannel TV Sound) mode

Follow these instructions to select an MTS mode.

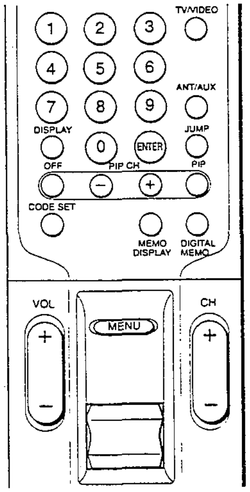
Select MAIN mode to listen to stereo sound.
The STEREO indicator on the TV lights up whenever a stereo broadcast is received.

Select SAP mode to listen to Second Audio Programs.

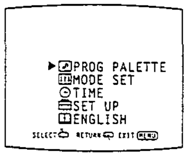
Select MONO mode to eliminate excessive noise during stereo broadcasts, caused by a weak incoming signal.

Note
If the TV is in video mode, the "MTS" display is shaded and cannot be selected.
Press TV/VIDEO on the TV or on the Remote Commander to change to TV mode.

Remote Commander (Outer panel)

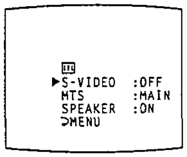


1 Press MENU.
The main menu appears.


▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH

2 Press the rocker control up or down until the cursor points to "MODE SET."

3 Click the rocker control.
The mode set menu appears.


▶S-VIDEO :OFF
MTS :MAIN
SPEAKER :ON
⊃MENU

4 Press the rocker control up or down until the cursor points to "MTS."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select the mode you want.
Each time you press the rocker control up or down, "MAIN," "SAP" and "MONO" appear in sequence.

7 Click the rocker control.
The mode is selected.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU." Then click the rocker control.

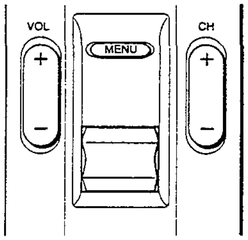
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

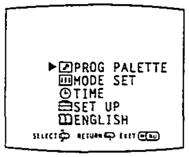
Setting SPEAKER ON or OFF

Follow these instructions to turn the TV speakers off when you connect an audio system (p.19), and on when you want to listen to the sound from the TV speakers.

Remote Commander

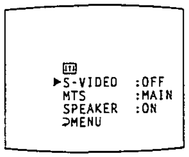


1 Press MENU.
The main menu appears.


▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH

2 Press the rocker control up or down until the cursor points to "MODE SET."

3 Click the rocker control.
The mode set menu appears.


▶S-VIDEO :OFF
MTS :MAIN
SPEAKER :ON
⊃MENU

4 Press the rocker control up or down until the cursor points to "SPEAKER."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select "ON" or "OFF."

7 Click the rocker control.
The setting is complete.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

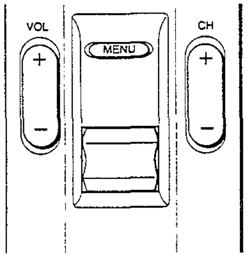
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

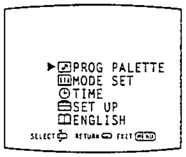
Setting REAR SPEAKER

Set REAR SPEAKER to "YES" to use the detachable or optional speakers as rear speakers (pp. 11 – 12).

Remote Commander



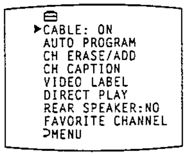
1 Press MENU.
The main menu appears.



▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

2 Press the rocker control up or down until the cursor points to "SET UP"

3 Click the rocker control.
The set up menu appears.



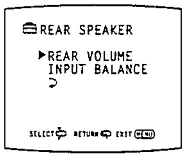
▶CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
MENU

4 Press the rocker control up or down until the cursor points to "REAR SPEAKER."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up to select "YES."

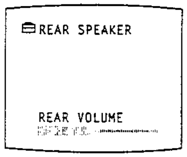
7 Click the rocker control.
The REAR SPEAKER screen appears.



REAR SPEAKER
▶REAR VOLUME
INPUT BALANCE
SELECT RETURN EXIT MENU

8 Press the rocker control up or down until the cursor points to the item you want to adjust.

9 Click the rocker control.
The adjustment screen appears.



REAR SPEAKER
REAR VOLUME

10 Use the rocker control to make the adjustment.

REAR VOLUME

Press the rocker control down to decrease the rear speaker volume.
Press the rocker control up to increase the rear speaker volume.

INPUT BALANCE (Use when you enjoy DOLBY SURROUND.)

Press the rocker control down to improve the input balance. (Set to the lowest point for best input balance little or no sound is heard from the rear speakers.)

Notes

- Setting REAR SPEAKER to "NO" does not turn off the rear speaker sound. Control the rear speaker volume with the REAR VOLUME adjustment.
- While the INPUT BALANCE adjustment screen is displayed, the sound from the front speakers is cut off.

11 Click the rocker control.
The setting is complete.

To set REAR SPEAKER to "NO"
Repeat steps 1 – 11, and select "NO" in step 6.

To return to the previous menu
Press the rocker control up or down until the cursor points to " MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

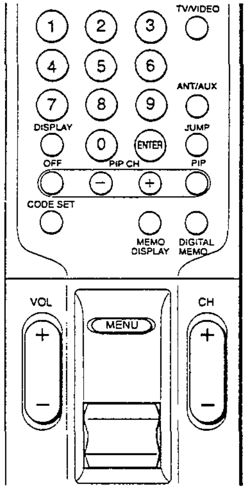
To return to the normal screen
Press MENU on the Remote Commander.

Setting channel captions — CH CAPTION

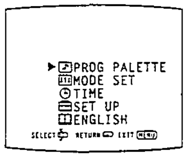
Follow these instructions to caption each channel number display with a name, for instance, the television station call letters. (You can set up to four letters or numbers).

Example: Caption channel 15 as "NBC."

Remote Commander (Outer panel)



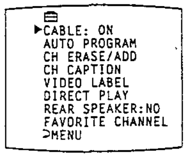
1 Press MENU.
The main menu appears.



▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

2 Press the rocker control up or down until the cursor points to "SET UP"

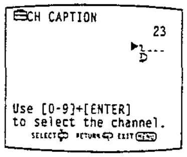
3 Click the rocker control.
The set up menu appears.



▶CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER:NO
FAVORITE CHANNEL
MENU

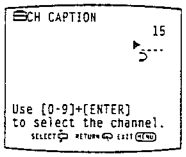
4 Press the rocker control up or down until the cursor points to "CH CAPTION."

5 Click the rocker control.
The CH CAPTION screen appears.



CH CAPTION
23
▶_ - - -
Use [0-9]+[ENTER]
to select the channel.
SELECT RETURN EXIT MENU

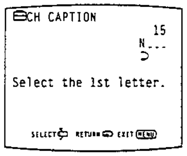
6 Press CH +/–, or press 1, 5 and ENTER to set channel "15."



CH CAPTION
15
▶_ - - -
Use [0-9]+[ENTER]
to select the channel.
SELECT RETURN EXIT MENU

7 Click the rocker control.
The first caption space turns red.

8 Press the rocker control up or down to select "N."
Each time you press the rocker control up or down, "0" – "9," "A" – "Z," "&," "/," "-" and "_" (blank space) appear in sequence.



CH CAPTION
15
N - - -
Select the 1st letter.
SELECT RETURN EXIT MENU

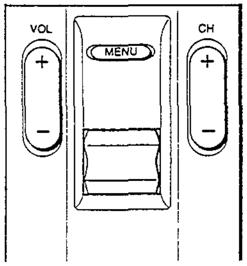
9 Click the rocker control.
The second caption space turns red.

(Continued)

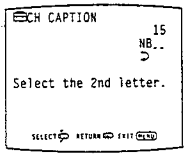
Setting channel captions – CH CAPTION

(Cont'd. from prev. page)

Remote Commander



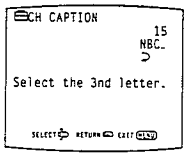
10 Press the rocker control up or down to select "B."


CH CAPTION
15
NB_ _
SELECT RETURN EXIT MENU

Select the 2nd letter.

11 Click the rocker control.
The third caption space turns red.

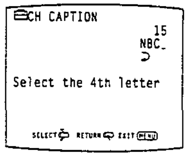
12 Press the rocker control up or down to select "C."


CH CAPTION
15
NBC_
SELECT RETURN EXIT MENU

Select the 3nd letter.

13 Click the rocker control.
The fourth caption space turns red.

14 Press the rocker control up or down to select a blank space.


CH CAPTION
15
NBC_
SELECT RETURN EXIT MENU

Select the 4th letter

15 Click the rocker control.
The setting is complete.
When you select or display the channel number, the channel caption also appears.

To caption more channels
Repeat steps 6 – 15.

To erase unnecessary captions
Display the CH CAPTION screen, select the channel with the caption you want to erase, and select blank spaces for the channel caption; then click the rocker control.
The caption for that channel is erased.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

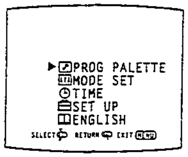
Note
You can set up to 32 channel captions. If the memory is full, "The memory is full, sorry" appears on the screen. Erase any unnecessary captions, and begin again.

Setting VIDEO LABEL

Follow these instructions to label each input mode, in order to identify the equipment connected to each input terminal.

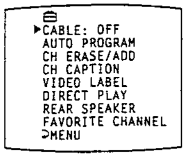
Example: Label VIDEO 1 IN as "VHS."

1 Press MENU.
The main menu appears.


▶PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

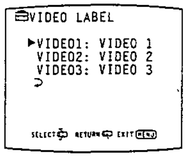
2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.


▶CABLE: OFF
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER
FAVORITE CHANNEL
⊃MENU

4 Press the rocker control up or down until the cursor points to "VIDEO LABEL."

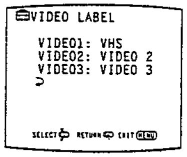
5 Click the rocker control.
The VIDEO LABEL screen appears.


VIDEO LABEL
▶VIDEO1: VIDEO 1
VIDEO2: VIDEO 2
VIDEO3: VIDEO 3
⊃
SELECT RETURN EXIT MENU

6 Press the rocker control up or down until the cursor points to the input mode you want to label. (In this case, the cursor is already pointing to "VIDEO 1.")

7 Click the rocker control.
The label display turns red.

8 Press the rocker control up or down to select "VHS."


VIDEO LABEL
VIDEO1: VHS
VIDEO2: VIDEO 2
VIDEO3: VIDEO 3
⊃
SELECT RETURN EXIT MENU

Each time you press the rocker control up or down, the label changes:

VIDEO 1 → BETA → 8mm → VHS → LD → S-VIDEO

9 Click the rocker control.
The setting is complete.
When you select or display the video mode, the video label appears.

To label other input modes
Repeat steps 6 – 9.

To change a label
Same as above.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU." Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen
Press MENU on the Remote Commander.

Using Timer-Activated Functions

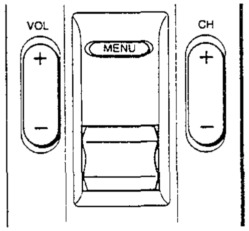
Setting DAYLIGHT SAVING

If you live in an area that uses daylight savings time, set DAYLIGHT SAVING to "YES" or "NO" depending on the season, before setting the current time. At the next daylight savings date, you will be able to automatically adjust all the time-related settings (CURRENT TIME, ON/OFF TIMER and CHANNEL BLOCK) simply by changing the DAYLIGHT SAVING setting.

When setting DAYLIGHT SAVING:

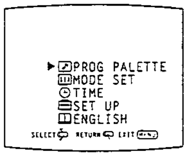
- **After the first Sunday in April (spring daylight savings)**
  Set to "YES" before setting the current time.
  Then, on the last Sunday in October (fall daylight savings), set to "NO."
  All the time-related settings automatically move one hour back.
- **After the last Sunday in October (fall daylight savings)**
  Set to "NO" before setting the current time.
  Then, on the first Sunday in April (spring daylight savings), set to "YES."
  All the time-related settings automatically move one hour ahead.

Remote Commander



Follow these instructions to set DAYLIGHT SAVING to "YES" or "NO."

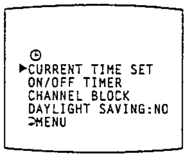
1 Press MENU.
The main menu appears.



```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
SELECT  RETURN  EXIT
```

2 Press the rocker control up or down until the cursor points to "TIME."

3 Click the rocker control.
The time menu appears.



```
▶CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 DAYLIGHT SAVING:NO
 ⊃MENU
```

4 Press the rocker control up or down until the cursor points to "DAYLIGHT SAVING."

5 Click the rocker control.
The mode display turns red.

6 Press the rocker control up or down to select "YES" or "NO."
The setting is complete.

7 Click the rocker control.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

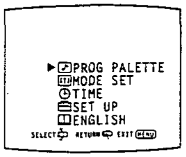
To return to the normal screen.
Press MENU on the Remote Commander.

Setting the clock — CURRENT TIME SET

Follow these instructions to set the current time. The correct current time must be set in order to use the other time-related functions (DAYLIGHT SAVING, ON/OFF TIMER, CHANNEL BLOCK).

Example: Set the time to 3:15 PM, Monday.

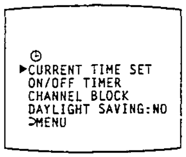
1 Press MENU.
The main menu appears.



```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
SELECT  RETURN  EXIT
```

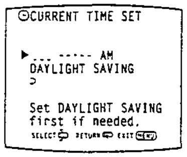
2 Press the rocker control up or down until the cursor points to "TIME."

3 Click the rocker control.
The time menu appears, and the cursor points to "CURRENT TIME SET."



```
▶CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 DAYLIGHT SAVING:NO
 ⊃MENU
```

4 Click the rocker control again.
The CURRENT TIME SET screen appears, with a reminder to set DAYLIGHT SAVING.



```
CURRENT TIME SET

▶... ----- AM
 DAYLIGHT SAVING
 ⊃

 Set DAYLIGHT SAVING
 first if needed.
 SELECT  RETURN  EXIT
```

If you do not need to set DAYLIGHT SAVING, click the rocker control and continue from step 5.

To set daylight saving

a Press the rocker control up or down until the cursor points to "DAYLIGHT SAVING."

b Click the rocker control.
The time menu appears, and the cursor points to "DAYLIGHT SAVING."

c Click the rocker control.

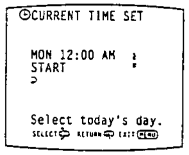
d Press the rocker control up or down to select "YES" or "NO."

e Click the rocker control.
The setting is complete.

To set the time
Press the rocker control up or down until the cursor points to "CURRENT TIME SET"; click the rocker control, then continue from step 5.

5 Click the rocker control.
The CURRENT TIME SET screen appears, and the "SUN" display appears (red).

6 Press the rocker control up or down to select "MON."
Each time you press the rocker control up or down, the day changes consecutively.



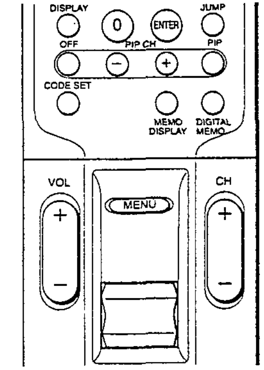
```
CURRENT TIME SET

 MON 12:00 AM
 START
 ⊃

 Select today's day.
 SELECT  RETURN  EXIT
```

(Continued)

Setting the clock — CURRENT TIME SET

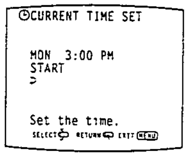
(Cont'd. from prev. page)

Remote Commander (Outer panel)



7 Click the rocker control.
The hour and am/pm displays turn red.

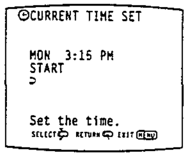
8 Press the rocker control up or down to set "3:00PM."
Each time you press the rocker control up or down, the hour changes in sequence beginning with "12:00AM."



```
⊙CURRENT TIME SET

 MON  3:00 PM
 START
 ⊃

 Set the time.
```

9 Click the rocker control.
The minute display turns red.

10 Press the rocker control up or down to select "15" (minutes).
Each time you press the rocker control up or down, the minutes change in sequence.



```
⊙CURRENT TIME SET

 MON  3:15 PM
 START
 ⊃

 Set the time.
```

11 Click the rocker control.
The cursor points to "START."

12 Check the actual time, and click the rocker control to start the clock.
The setting is complete.

To reset the time
Display the CURRENT TIME SET screen and repeat steps 5 – 12.

To display the current time
Press DISPLAY.

To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

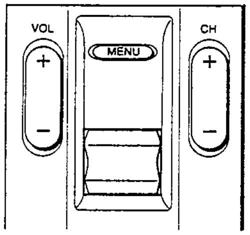
To return to the normal screen.
Press MENU on the Remote Commander.

Setting the ON/OFF TIMER

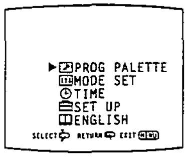
Follow these instructions to make the program of your choice appear on the screen at a specified time.

Example: Set the timer to turn on the TV every Monday through Friday at 1:30 AM for 3 hours, on channel 8, as PROGRAM 1. (You can set up to three programs.)

Remote Commander



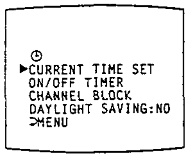
1 Press MENU.
The main menu appears.



```
▶PROG PALETTE
 MODE SET
 ⊙TIME
 SET UP
 ENGLISH
```

2 Press the rocker control up or down until the cursor points to "TIME."

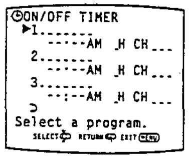
3 Click the rocker control.
The time menu appears.



```
⊙
▶CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 DAYLIGHT SAVING:NO
 ⊃MENU
```

4 Press the rocker control up or down until the cursor points to "ON/OFF TIMER."

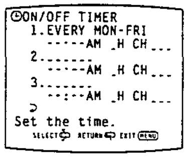
5 Click the rocker control.
The ON/OFF TIMER screen appears, and the cursor points to "1."



```
⊙ON/OFF TIMER
 ▶1.------
    --:--AM _H CH___
  2.------
    --:--AM _H CH___
  3.------
    --:--AM _H CH___
  ⊃
 Select a program.
```

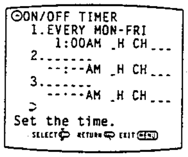
6 To set program 1, click the rocker control.
(To set program 2 or 3, press the rocker control up or down until the cursor points to that program; then click the rocker control.)
The day input space turns red.

7 Press the rocker control up or down to select "EVERY MON-FRI"; then click the rocker control.
Each time you press the rocker control up, the days of the week change as shown in Fig. 1 (p. 63).



```
⊙ON/OFF TIMER
  1.EVERY MON-FRI
    --:--AM _H CH___
  2.------
    --:--AM _H CH___
  3.------
    --:--AM _H CH___
  ⊃
 Set the time.
```

8 Press the rocker control up or down to select "1:00AM"; then click the rocker control.
Each time you press the rocker control up or down, the hour changes in sequence.

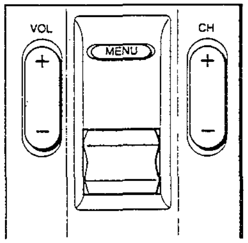


```
⊙ON/OFF TIMER
  1.EVERY MON-FRI
     1:00AM _H CH___
  2.------
    --:--AM _H CH___
  3.------
    --:--AM _H CH___
  ⊃
 Set the time.
```

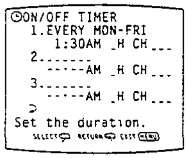
(Continued)

Setting the ON-OFF TIMER *(Cont'd from prev. page)*

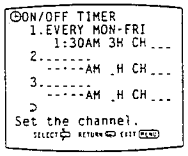
Remote Commander



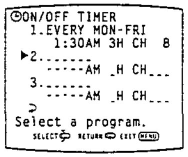
9 Press the rocker control up or down to select "30" (minutes);
Then click the rocker control.
Each time you press the rocker control up or down, the minutes change in sequence.


```
⊙ON/OFF TIMER
   1.EVERY MON-FRI
      1:30AM _H CH___
   2.------
     -----AM _H CH___
   3.------
     -----AM _H CH___
  ⊃
 Set the duration.
```
SELECT RETURN EXIT MENU

10 Press the rocker control up or down to select "3" (hour duration); then click the rocker control.
Each time you press the rocker control up or down, the duration changes from "1" – "6" in sequence.


```
⊙ON/OFF TIMER
   1.EVERY MON-FRI
      1:30AM 3H CH___
   2.------
     -----AM _H CH___
   3.------
     -----AM _H CH___
  ⊃
 Set the channel.
```
SELECT RETURN EXIT MENU

11 Press the rocker control up or down to select "8" (channel); then click the rocker control.
The TIMER/STAND BY indicator lights, indicating that the setting is complete.
Each time you press the rocker control up or down, the channel number changes from 1 – 125 in sequence.


```
⊙ON/OFF TIMER
   1.EVERY MON-FRI
      1:30AM 3H CH  8
 ▶2.------
     -----AM _H CH___
   3.------
     -----AM _H CH___
  ⊃
 Select a program.
```
SELECT RETURN EXIT MENU

The display "TV WILL TURN OFF" appears on the screen one minute before the timer duration ends.

To set program 2 or 3.
Click the rocker control and repeat steps 6 – 11.

To erase an ON/OFF TIMER setting
Display the ON/OFF TIMER screen, select the setting you want to erase, and select the underlined spaces for the day setting.
The ON/OFF TIMER setting is erased.

To enter a new ON/OFF TIMER setting
Display the ON/OFF TIMER screen and repeat steps 6 – 11.

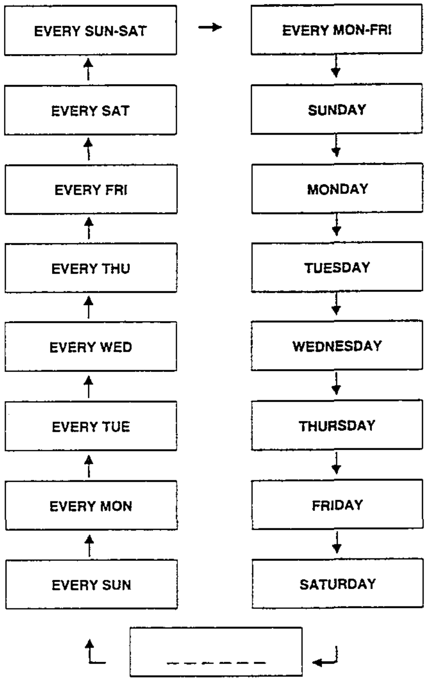
To return to the previous menu
Press the rocker control up or down until the cursor points to " ⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

Note
If you unplug the TV or a power failure occurs, both the clock and timer settings will be erased. Reset the current time; then set the timer.

Fig. 1
Selecting the day(s) of the week
When you press the rocker control up, the days of the week appear in the following order:


EVERY SUN-SAT
EVERY MON-FRI
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY

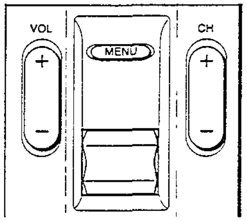
EVERY SUN
EVERY MON
EVERY TUE
EVERY WED
EVERY THU
EVERY FRI
EVERY SAT

Setting CHANNEL BLOCK

Follow these instructions to prevent a channel from appearing on the screen during the time that you specify. You can use this function to prevent children from watching unsuitable programs.

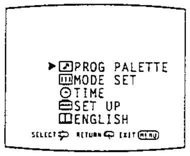
Example: Set CHANNEL BLOCK every Saturday at 4:30 PM for 1 hour, on Channel 12.

Remote Commander



Note
If you have not set the current time, the "CHANNEL BLOCK" display is shaded and cannot be selected.

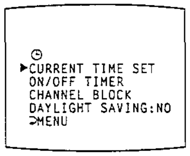
1 Press MENU.
The main menu appears.



```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
```

2 Press the rocker control up or down until the cursor points to "TIME."

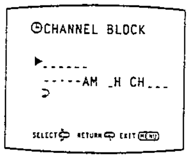
3 Click the rocker control.
The time menu appears.



```
▶CURRENT TIME SET
 ON/OFF TIMER
 CHANNEL BLOCK
 DAYLIGHT SAVING:NO
 ⊃MENU
```

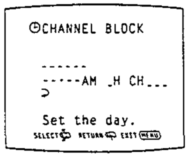
4 Press the rocker control up or down until the cursor points to "CHANNEL BLOCK."

5 Click the rocker control.
The CHANNEL BLOCK screen appears, and the cursor points to the day input space.



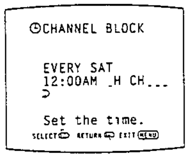
```
CHANNEL BLOCK

▶------
 -----AM _H CH___
⊃
```

6 Click the rocker control.
The day input space turns red.



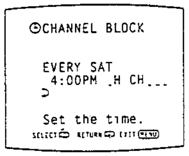
```
CHANNEL BLOCK

 ------
 -----AM _H CH___
⊃

Set the day.
```

7 Press the rocker control up or down to select "EVERY SAT"; then click the rocker control.
Each time you press the rocker control up or down, the days of the week change as shown in Fig. 1 (p. 65).



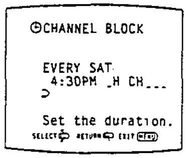
```
CHANNEL BLOCK

 EVERY SAT
 12:00AM _H CH___
⊃

Set the time.
```

8 Press the rocker control up or down to select "4:00PM"; then click the rocker control.
Each time you press the rocker control up or down, the hour changes in sequence.



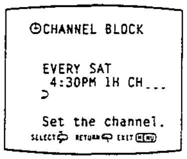
```
CHANNEL BLOCK

 EVERY SAT
  4:00PM _H CH___
⊃

Set the time.
```

9 Press the rocker control up or down to select ":30" (minutes); then click the rocker control.
Each time you press the rocker control up or down, the minutes change in sequence.



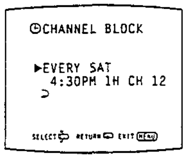
```
CHANNEL BLOCK

 EVERY SAT
  4:30PM _H CH___
⊃

Set the duration.
```

10 Press the rocker control up or down to select "1" (hour duration); then click the rocker control.
Each time you press the rocker control up or down, the duration changes from "1" – "6" in sequence.



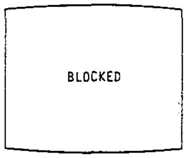
```
CHANNEL BLOCK

 EVERY SAT
  4:30PM 1H CH___
⊃

Set the channel.
```

11 Press the rocker control up or down to select "12" (channel); then click the rocker control.
The setting is complete.
Each time you press the rocker control up or down, the channel number changes from "1" – "125" in sequence.



```
CHANNEL BLOCK

▶EVERY SAT
  4:30PM 1H CH 12
⊃
```

At the specified time, "BLOCKED" appears in red on the screen, and the picture of the specified channel is blocked and the sound is muted.



```
BLOCKED
```

To erase a CHANNEL BLOCK setting
Display the CHANNEL BLOCK screen and select the underlined spaces for the day setting.
The CHANNEL BLOCK setting is erased.

To enter a new CHANNEL BLOCK setting
Display the CHANNEL BLOCK screen and repeat steps 4 – 10. (You can only set one CHANNEL BLOCK at a time.)

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

To return to the main menu
Repeat the above, until you reach the main menu.

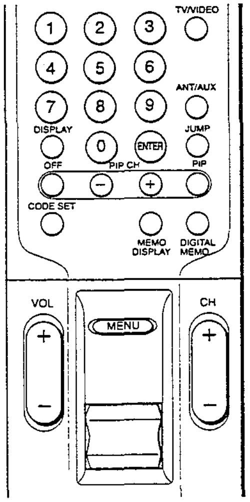
To return to the normal screen.
Press MENU on the Remote Commander.

Note
If the ON/OFF TIMER is set for an overlapping time (pp. 65 – 66), the later time setting takes precedence. For example, if CHANNEL BLOCK is set for 2:00 PM and ON/OFF TIMER is set for 3:00 PM, ON/OFF TIMER will take effect at 3:00 PM.

Setting FAVORITE CHANNEL

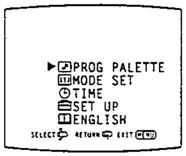
By setting FAVORITE CHANNEL, you can select the channels you use most frequently (up to seven channels) simply by clicking the rocker control on the Remote Commander.

Remote Commander (Outer panel)



Follow these instructions to set the channels.

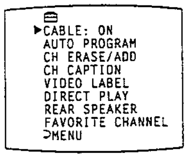
1 Press MENU.
The main menu appears.



```
▶PROG PALETTE
 MODE SET
 TIME
 SET UP
 ENGLISH
SELECT RETURN EXIT MENU
```

2 Press the rocker control up or down until the cursor points to "SET UP."

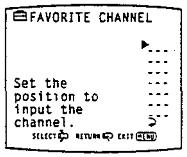
3 Click the rocker control.
The set up menu appears.



```
▶CABLE: ON
 AUTO PROGRAM
 CH ERASE/ADD
 CH CAPTION
 VIDEO LABEL
 DIRECT PLAY
 REAR SPEAKER
 FAVORITE CHANNEL
 ⊃MENU
```

4 Press the rocker control up or down until the cursor points to "FAVORITE CHANNEL."

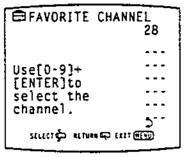
5 Click the rocker control.
The FAVORITE CHANNEL screen appears, and the cursor points to the first channel position.



```
FAVORITE CHANNEL
                 ▶---
                  ---
                  ---
Set the           ---
position to       ---
input the         ---
channel.         ⊃---
SELECT RETURN EXIT MENU
```

6 Press the rocker control up or down to select the channel position; then click the rocker control.

7 Press 0 – 9 and ENTER to set the channel number.



```
FAVORITE CHANNEL
                  28
                  ---
Use[0-9]+         ---
[ENTER]to         ---
select the        ---
channel.          ---
                 ⊃---
SELECT RETURN EXIT MENU
```

8 Click the rocker control.
The setting is complete.

To set other channels
Repeat steps 6 – 8.

To erase a favorite channel setting
Press the rocker control up or down until the cursor points to the channel number you want to erase; click the rocker control, then press 0 and ENTER.

To reset a favorite channel setting
Display the FAVORITE CHANNEL screen and repeat steps 6 – 8.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU." Then click the rocker control.

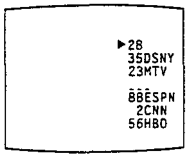
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

Selecting a favorite channel

After setting the channels, follow these instructions to select the channel you want to watch.

1 Click the rocker control.
The FAVORITE CHANNEL display appears.

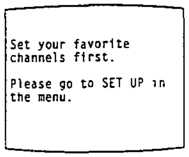


```
▶28
 35DSNY
 23MTV
 ---
 88ESPN
  2CNN
 56HBO
```

Note
If you have set channel captions (pp. 57 – 58), the captions appear with the channel numbers.

2 Press the rocker control up or down to select the channel you want to watch; then click the rocker control.
The channel is selected.

If you click the rocker control on the Remote Commander before setting FAVORITE CHANNEL, this screen appears.



```
Set your favorite
channels first.

Please go to SET UP in
the menu.
```

Follow steps 1 – 8 to set your favorite channels, and then make the selection.

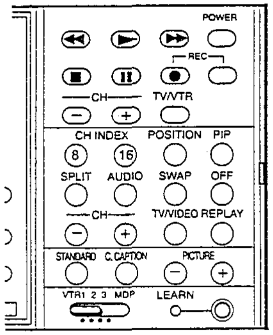
Using the Programmable Remote Commander

You can operate other video equipment (such as VCRs, video disc players and cable boxes) that have an infrared remote detector with this supplied Remote Commander.

Operating Sony video equipment

Follow these instructions to operate Sony video cassette recorders (Beta, 8 mm and VHS) and video disc players (including multi-disc players).

Remote Commander (Inner panel)



1 Set the VTR1-2-3 MDP selector according to the video equipment you want to operate.

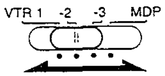


Fig. 2: Video equipment settings

If you want to operate a:	set to:
Beta, ED Beta VCR	VTR 1
8 mm VCR	VTR 2
VHS VCR	VTR 3
Video disc player	MDP

2 Use the video operating buttons to control the connected equipment.

Fig. 3: Operating a VCR (VTR1, 2, 3)

To turn on or off	Press POWER.
To change channels (when watching TV programs through the VCR's tuner)	Press CH +/–
To record	Press ● and REC simultaneously.
To play	Press ►.
To stop	Press ■.
To fast forward	Press ►►.
To rewind the tape	Press ◄◄.
To pause	Press ❚❚. *To resume normal playback, press again.*
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback. *To resume normal playback, release the button.*
To change input mode	Press TV/VTR.

Fig. 4: Operating a Video Disc Player (MDP)

To turn on or off	Press POWER.
To play	Press ►
To stop	Press ■.
To pause	Press ❚❚. *To resume normal playback, press again.* **Note** This function is effective only for CAV (standard-play disc). With CLV (extended-play disc), the TV goes off (standby mode) if you press ❚❚.
To search the picture forward and backward	Keep pressing ►► or ◄◄ during playback. *To resume normal playback, release the button.*

Notes

- If the video equipment does not have a certain function, the corresponding button on this Remote Commander will not operate.
- If you set another manufacturer's code to a VTR1-2-3 MDP selector position (pp. 72 – 73), you must also set the Sony code to operate Sony equipment.

Caution

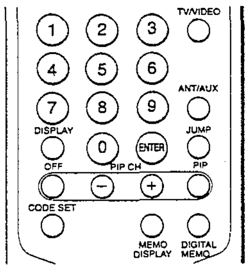
When you replace the batteries, do it within approximately 30 minutes. Otherwise the settings you made under the Pre-Programmed function (pp. 72 – 74) and Learning function (p. 75) may be erased.

Operating non-Sony or Sony video equipment

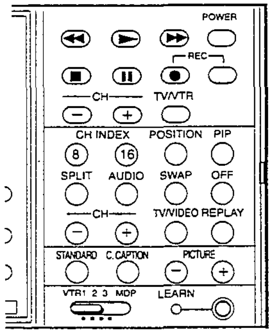
Follow these instructions to set the manufacturer's code, which will enable you to operate non-Sony and Sony video equipment with the pre-programmed Remote Commander.

Example: Operate an RCA video cassette recorder connected to the VIDEO 2 IN jacks.

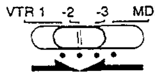
Remote Commander
(Outer panel)


TV/VIDEO
1
2
3
4
5
6
ANT/AUX
7
8
9
DISPLAY
JUMP
OFF
0
ENTER
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO

(Inner panel)

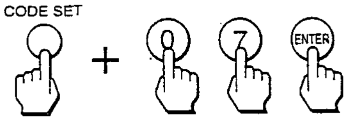

POWER
REC
CH
TV/VTR
CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN

1 Set the VTR1-2-3 MDP selector to VTR2.



Note
To use another manufacturer's equipment besides a Sony VCR, set the selector to a position not being used for your Sony video equipment.

2 While pressing CODE SET, press 0, 7 and ENTER to set RCA's code number. (For manufacturer code numbers, see Figs. 5, 6 and 7 on p. 73.)


CODE SET
+
0
7
ENTER

A long beep sounds, indicating that the code has been set.

Note
If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 3 to set the code.

3 Use the video operating buttons to operate the connected equipment. (see Fig. 3 on p. 70 and Fig. 4 on p. 71.)

Fig. 5: VCR manufacturer code numbers

MANUFACTURER	CODE
SONY	01, 02, 03
CANON	05
EMERSON	22, 30, 33
FISHER	10, 11, 12, 15
FUNAI	29
GENERAL ELECTRIC	05, 08
GOLDSTAR	25
HITACHI	07, 08, 36
JVC	16, 35
MAGNAVOX	05, 06, 09
MITSUBISHI	18, 19, 26, 27
MULTITECH	29
NEC	16, 23, 31
PANASONIC	05, 06
PHILCO	05, 06
PHILIPS	05, 06, 09
QUASAR	05, 06
RCA	07, 08
SAMSUNG	24, 32
SANYO	11, 15
SCOTT	21
SHARP	13, 14
SHINTOM	34
SYLVANIA	05, 06, 09
SYMPHONIC	29
TEKNIKA	28, 29
TOSHIBA	20, 21
TOTE VISION	25
ZENITH	17

Fig. 6: MDP manufacturer code numbers

MANUFACTURER	CODE
SONY	04
KENWOOD	58
MAGNAVOX	52
MARANZ	54
MITSUBISHI	51
PANASONIC	55
PHILIPS	52
PIONEER	51
RCA	51
SANYO	57
SHARP	56
YAMAHA	53

Fig. 7: Sony equipment and code numbers

SONY EQUIPMENT	CODE
Beta, ED Beta VCR	01
8 mm VCR	02
VHS VCR	03
Video disc player	04

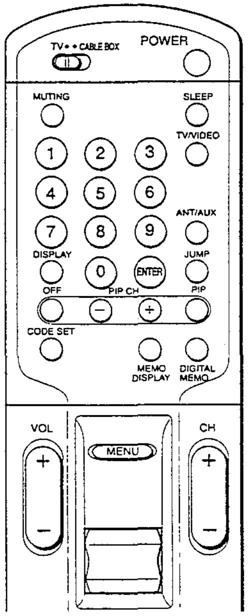
Note
In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied Remote Commander. This is because your equipment may use a code that is not provided with this Remote Commander. In this case, please use the equipment's own remote control unit.

Operating a cable converter box

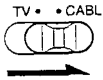
Follow these instructions to set the manufacturer's code, which will enable you to operate a connected cable converter box with the pre-programmed Remote Commander.

Example: Operate a connected Zenith cable converter box.

Remote Commander (Outer panel)



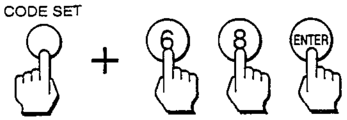
1 Set the TV/CABLE BOX selector to CABLE BOX.



Notes

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this Remote Commander and you may not be able to operate your cable converter box with the supplied Remote Commander. In this case, use the equipment's own remote control unit.

2 While pressing CODE SET, press 6 and 8 (Zenith's code number — see Fig. 8) and ENTER.

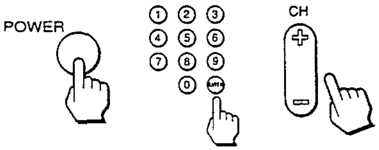


A long beep sounds, indicating that the code has been set.

Note

If you press a wrong code, or if the code has not been set, four short beeps sound. Repeat step 2 to set the code.

3 Use the TV control buttons (POWER, 0 – 9, ENTER and CH +/–) to operate the cable converter box.



To return to the normal screen
Set the TV/CABLE BOX selector to TV; then use the TV control buttons to control the TV.

For more details on operating the cable box
Refer to the operating instructions that come with the cable box.

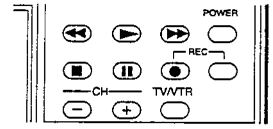
Fig. 8: Cable box manufacturer code numbers

MANUFACTURER	CODE
JERROLD	60, 61, 62, 63, 64, 65
PIONEER	69, 70
SCIENTIFIC ATLANTA	66, 67
TOCOM	71, 72
ZENITH	68

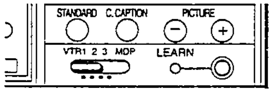
Operating non-Sony or Sony audio and video equipment (Learning function)

Follow these instructions to "teach" any of the programmable buttons to operate the function of another Remote Commander. Use Learning in order to operate non-Sony and Sony audio equipment, and a remote controlled cable converter box or video equipment whose manufacturer code is not listed (Fig. 5, Fig. 6 – p. 73; Fig. 8 – p. 74).

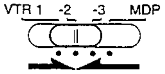
Remote Commander (Inner panel)
Programmable buttons



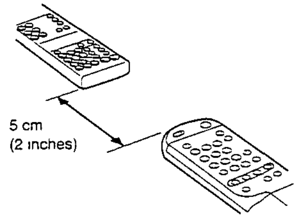
LEARN button and indicator lamp



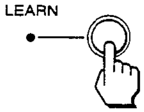
1 Set the VTR1-2-3 MDP selector to VTR3 or MDP (Learning will not work in VTR1 or VTR2 settings.)



2 Place the supplied Remote Commander head to head with equipment's remote commander, approximately 5 cm (2 inches) apart.



3 Press LEARN.
The LEARN indicator lights up (red).



4 Momentarily press the button of the supplied Remote Commander that you want to learn a function.
The LEARN indicator goes off and lights up again, and a short beep sounds, indicating that the Remote Commander is ready for learning.

The Remote Commander beeps repeatedly if an error has occurred. Repeat this step.

5 Press and hold down the button of the other remote commander, whose function you want to "teach," until the LEARN indicator turns red.
A long beep sounds and the LEARN indicator goes off and lights up again, indicating that learning is complete. If not, repeat steps 4 and 5..

6 Repeat steps 4 and 5 to teach functions to other buttons.

7 Press LEARN.
The LEARN indicator lamp lights up (red), then goes off, indicating that learning is complete.

For accurate learning
Do not move the remote commanders during the learning process.

Notes

- If the memory is full, three short beeps sound and the LEARN indicator flashes off and on. Use learning to re-program a button whose learned function you do not use often; the previously learned function is erased.
- If the other remote commander's signal cannot be learned, a short beep sounds and the LEARN indicator flashes once.
- If you press a button that cannot be used for learning, four short beeps sound and the LEARN indicator flashes four times.

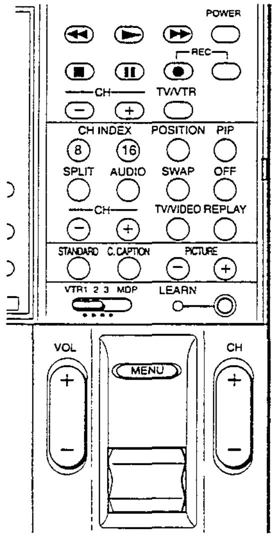
Selecting a VCR mode directly — DIRECT PLAY

Follow these instructions to switch from TV to VCR mode by simply pressing the ► (playback) button on the supplied Remote Commander.

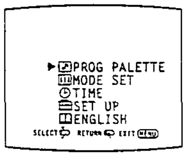
Example: Connect your VCR to the VIDEO 1 IN jacks, and set the VTR1-2-3 MDP selector to VTR2. When you press ►, the input mode changes to the VCR connected to the VIDEO 1 IN jacks.

After completing the steps below, the VTR selector position is retained in the TV's memory.

Remote Commander (Inner panel)

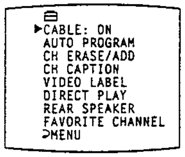

POWER
REC
CH
TV/VTR
CH INDEX
POSITION
PIP
8
16
SPLIT
AUDIO
SWAP
OFF
CH
TV/VIDEO
REPLAY
STANDARD
C.CAPTION
PICTURE
VTR1 2 3 MDP
LEARN
VOL
MENU
CH

1 Press MENU.
The main menu appears.


►PROG PALETTE
MODE SET
TIME
SET UP
ENGLISH
SELECT RETURN EXIT MENU

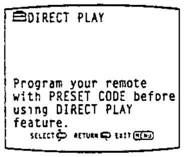
2 Press the rocker control up or down until the cursor points to "SET UP."

3 Click the rocker control.
The set up menu appears.


►CABLE: ON
AUTO PROGRAM
CH ERASE/ADD
CH CAPTION
VIDEO LABEL
DIRECT PLAY
REAR SPEAKER
FAVORITE CHANNEL
⊃MENU

4 Press the rocker control up or down until the cursor points to "DIRECT PLAY."

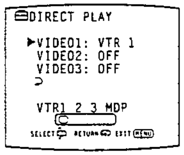
5 Click the rocker control.
A message screen appears.


DIRECT PLAY
SELECT RETURN EXIT MENU

Program your remote with PRESET CODE before using DIRECT PLAY feature.

Note
This screen reminds you to set the manufacturer's code, if you have not already done so (pp. 72 – 73).

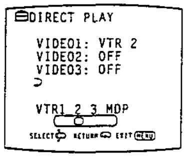
6 Click the rocker control again.
The DIRECT PLAY screen appears.


DIRECT PLAY
►VIDEO1: VTR 1
VIDEO2: OFF
VIDEO3: OFF
⊃
VTR1 2 3 MDP
SELECT RETURN EXIT MENU

7 Press the rocker control up or down until the cursor points to the video input mode. (When the video equipment is connected to VIDEO 1 IN, select "VIDEO1.")

8 Click the rocker control.
The mode display turns red.

9 Press the rocker control up or down to select the VTR selector mode you have set on the Remote Commander. (When the VTR1-2-3 MDP selector is set to VTR2, select "VTR 2.")
Each time you press the rocker control up or down, "VTR 1," "VTR 2," "VTR 3," "MDP" and "OFF" appear in sequence.


DIRECT PLAY
VIDEO1: VTR 2
VIDEO2: OFF
VIDEO3: OFF
⊃
VTR1 2 3 MDP
SELECT RETURN EXIT MENU

10 Click the rocker control.
The direct play setting is complete.

To set direct play for other connected video equipment
Repeat steps 7 – 10.

To return to the previous menu
Press the rocker control up or down until the cursor points to "⊃ MENU."
Then click the rocker control.

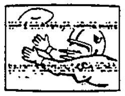
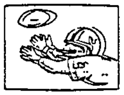
To return to the main menu
Repeat the above, until you reach the main menu.

To return to the normal screen.
Press MENU on the Remote Commander.

Appendix

Troubleshooting

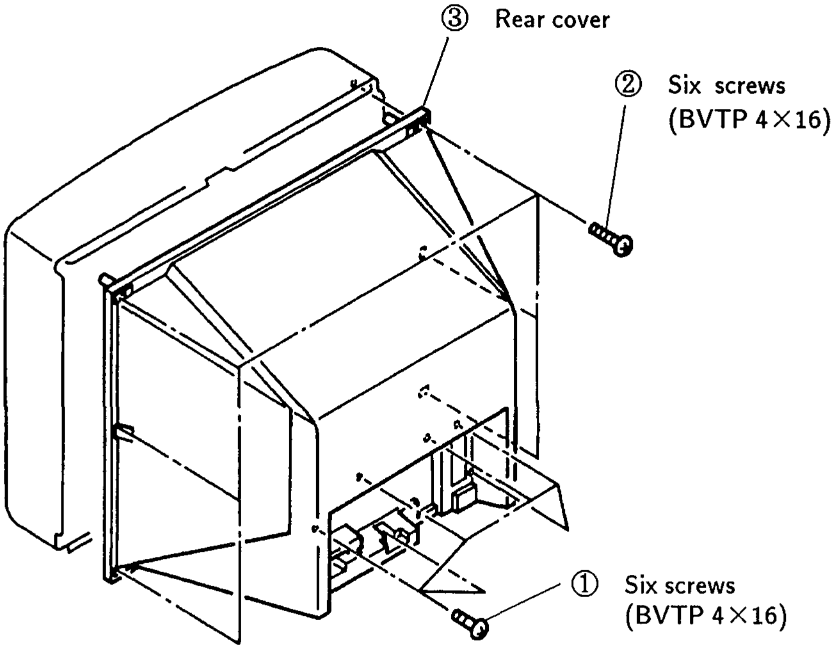
Disturbances in picture and sound can often be eliminated by checking the symptoms and following the suggestions listed here. If the problem still cannot be solved, contact your nearest service facility.

Symptom	Possible causes and remedies
No picture (screen not lit), no sound	• Make sure POWER is switched on. • Check the power cord connection. • Check that the TV/VIDEO and VTR1-2-3 MDP controls are set correctly. • Make sure that the TV/CABLE BOX selector is set to TV.
Poor or no picture (screen not lit), good sound	• Adjust the picture using the VIDEO screen (pp. 46 – 49). • Check the antenna/cable connections.
Good picture, no sound	• Press VOLUME + on the TV or VOL + on the Remote Commander. • Press MUTING on the Remote Commander. • Check the MTS setting (p. 54). • Check that the TV/VIDEO and VTR1-2-3 MDP controls are set correctly. • Make sure SPEAKER is set to ON (p. 55).
No color for color programs	• Check the HUE and COLOR settings (pp. 46 – 47).
Snow and noise only	• Check that it is an active or correct channel. • Check the cable setting. • Check the ANT/AUX button setting. • Check antenna/cable connections.
 Dotted lines or stripes	This is often caused by local interference (for example, cars, neon signs and hairdryers). Adjust the telescopic aerial for minimum interference.
 Double images or ghosts	Reflections from nearby mountains or buildings often cause this problem. Connecting a highly directional outdoor antenna or a CATV cable may improve the picture.

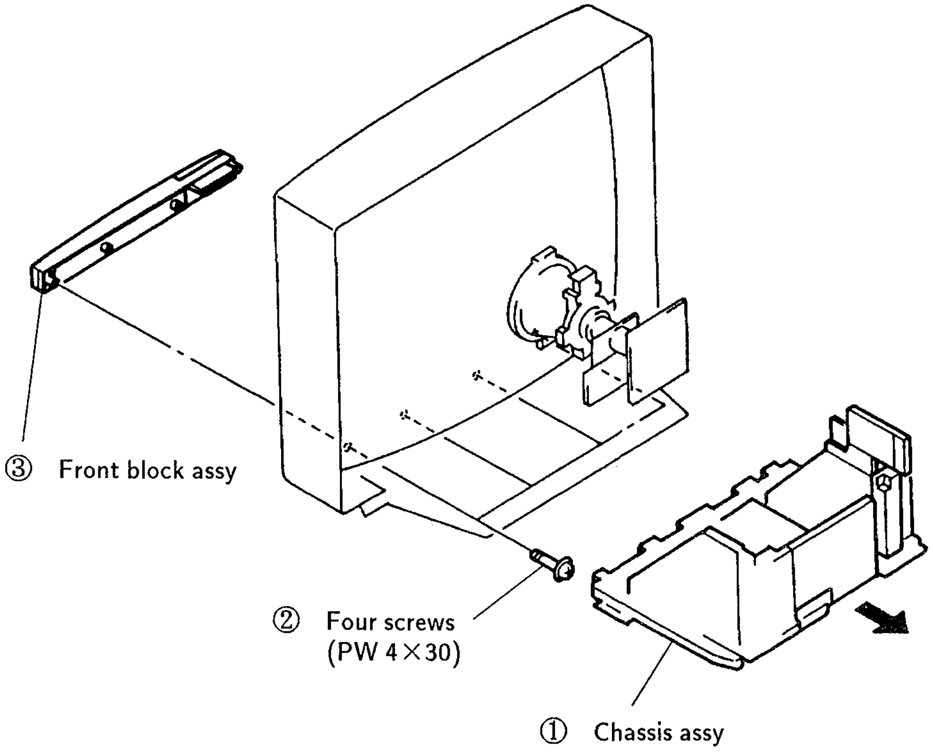
Try another channel. It could be station trouble.

SECTION 2
DISASSEMBLY

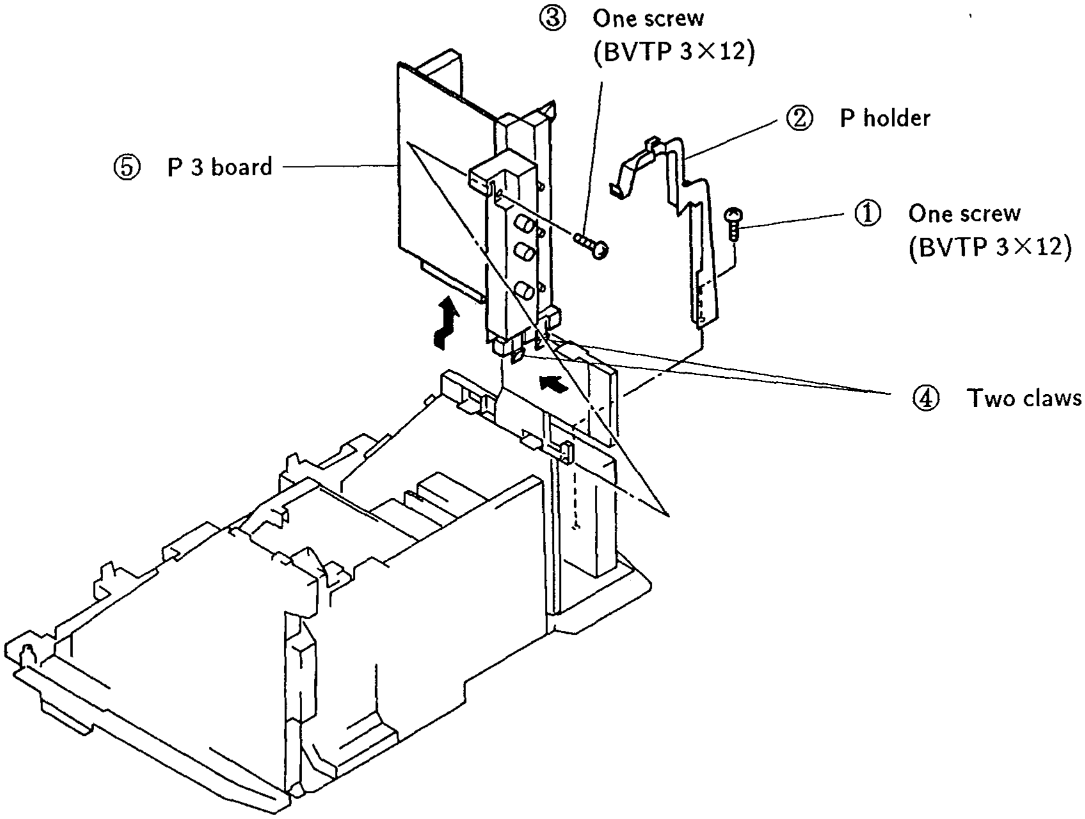
2-1. REAR COVER REMOVAL


③ Rear cover
② Six screws
(BVTP 4×16)
① Six screws
(BVTP 4×16)

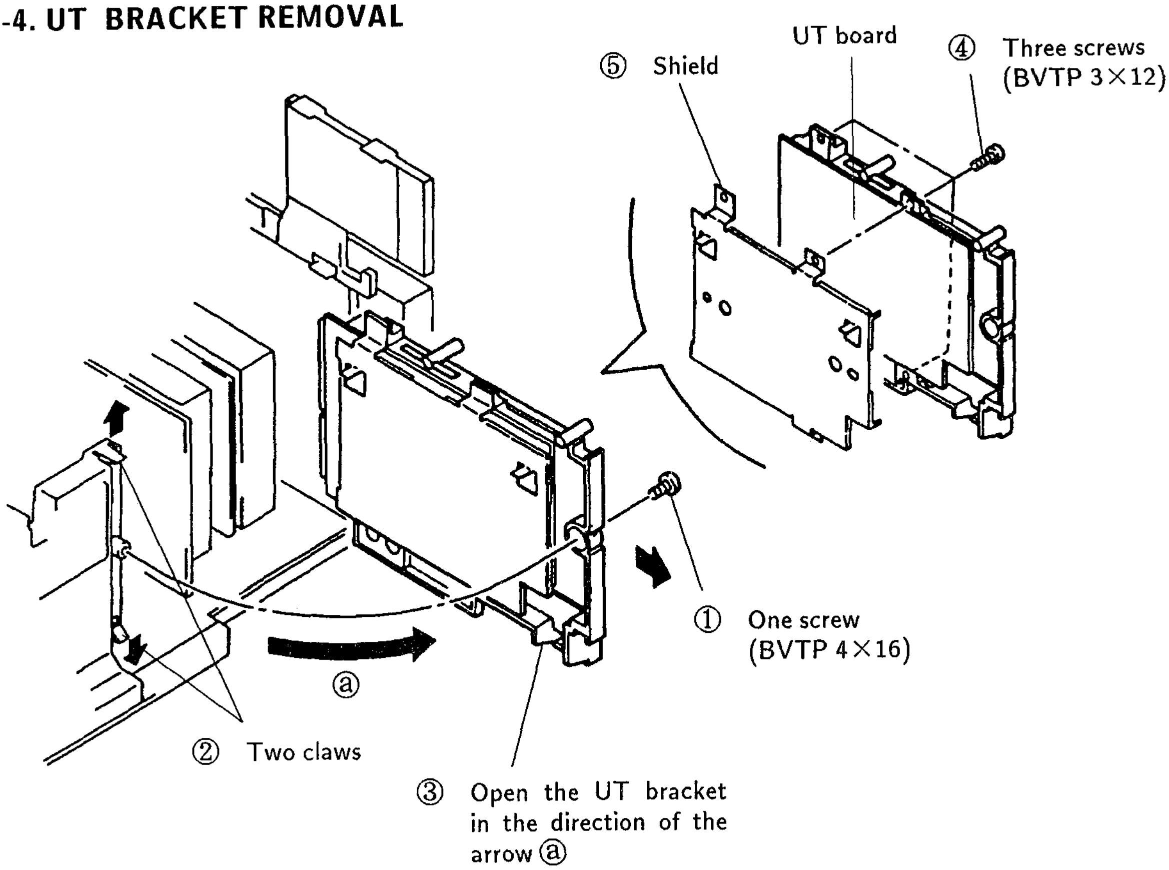
2-2. CHASSIS ASSY AND FRONT BLOCK ASSY REMOVAL


③ Front block assy
② Four screws
(PW 4×30)
① Chassis assy

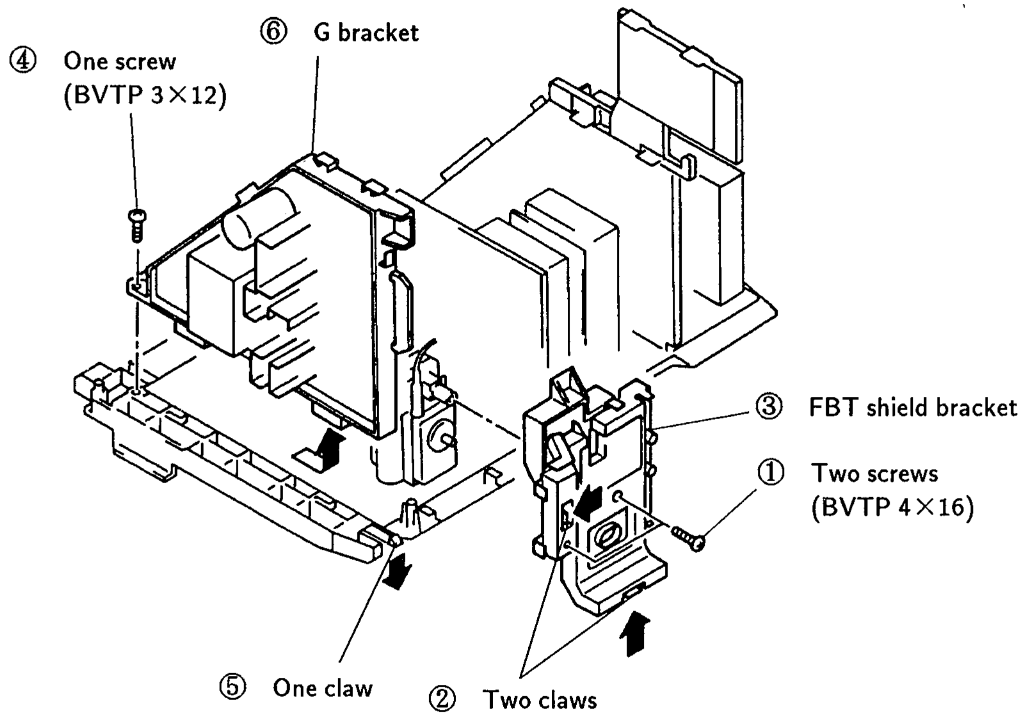
2-3. P3 BOARD REMOVAL


③ One screw
(BVTP 3×12)
② P holder
⑤ P 3 board
① One screw
(BVTP 3×12)
④ Two claws

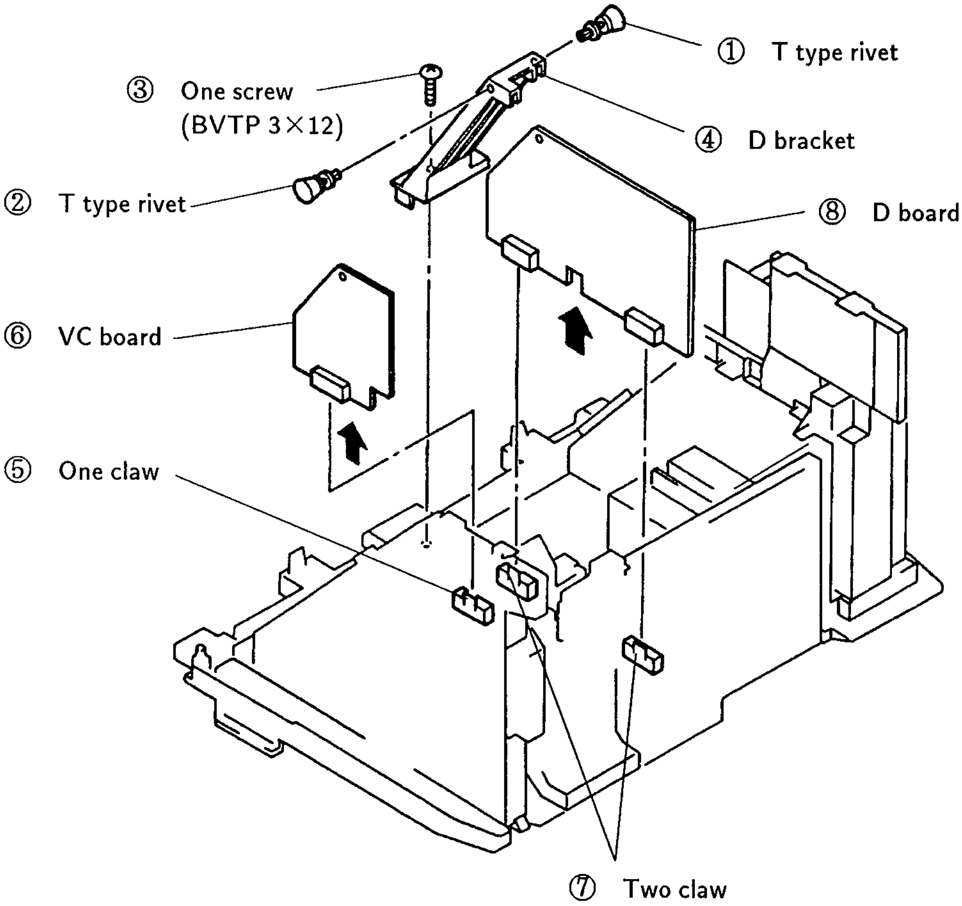
2-4. UT BRACKET REMOVAL


UT board
⑤ Shield
④ Three screws
(BVTP 3×12)
① One screw
(BVTP 4×16)
ⓐ
② Two claws
③ Open the UT bracket
in the direction of the
arrow ⓐ

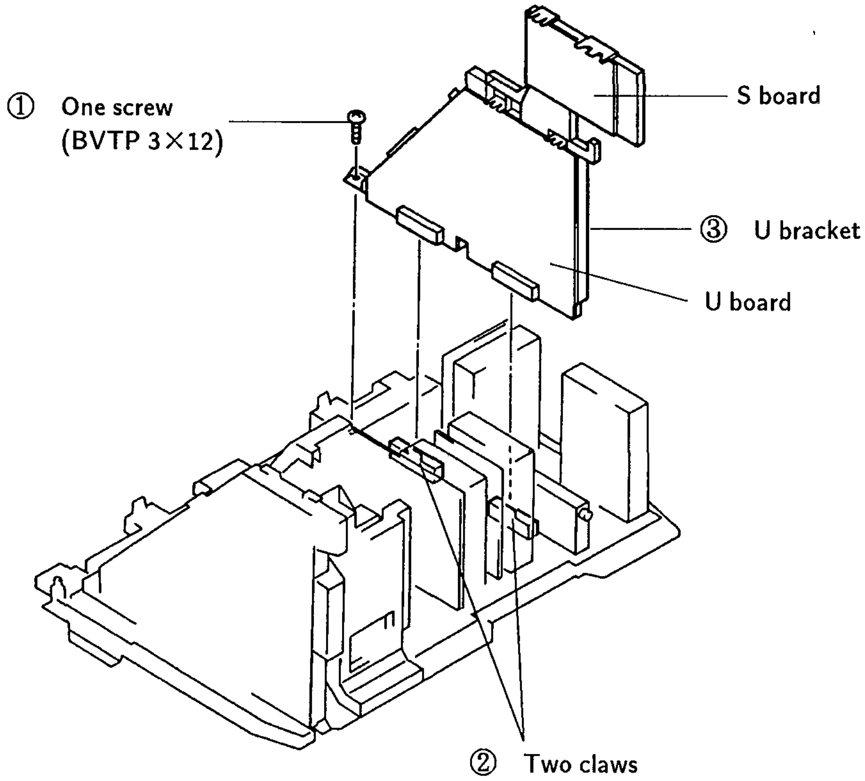
2-5. G BRACKET REMOVAL


⑥ G bracket
④ One screw (BVTP 3×12)
③ FBT shield bracket
① Two screws (BVTP 4×16)
⑤ One claw
② Two claws

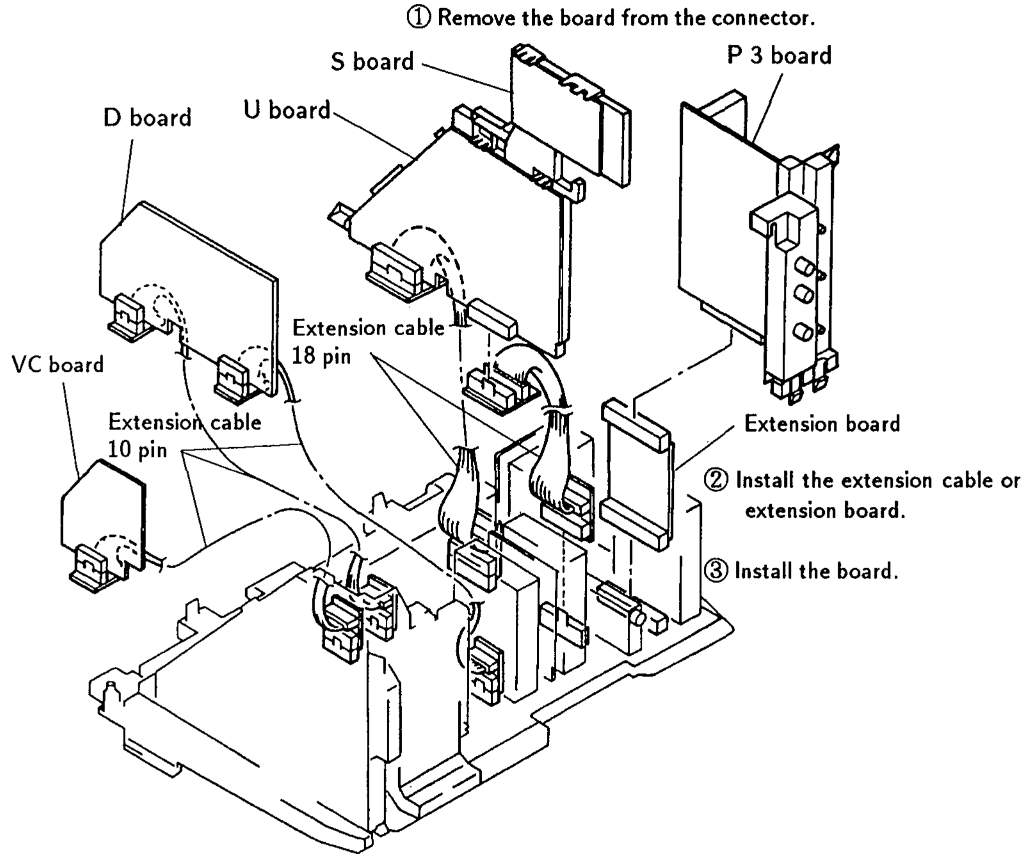
2-6. D BOARD REMOVAL


① T type rivet
③ One screw (BVTP 3×12)
④ D bracket
② T type rivet
⑧ D board
⑥ VC board
⑤ One claw
⑦ Two claw

2-7. U BRACKET REMOVAL


① One screw
(BVTP 3×12)
S board
③ U bracket
U board
② Two claws

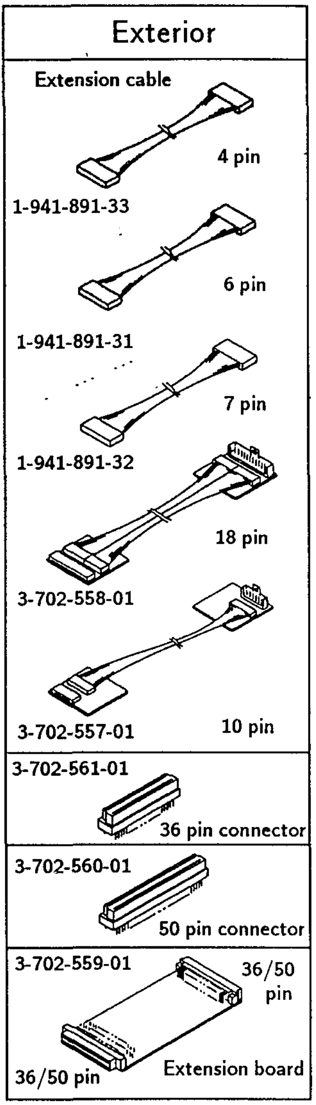
2-8. CONNECTOR CABLE


S board
P 3 board
D board
U board
Extension cable
18 pin
VC board
Extension cable
10 pin
Extension board

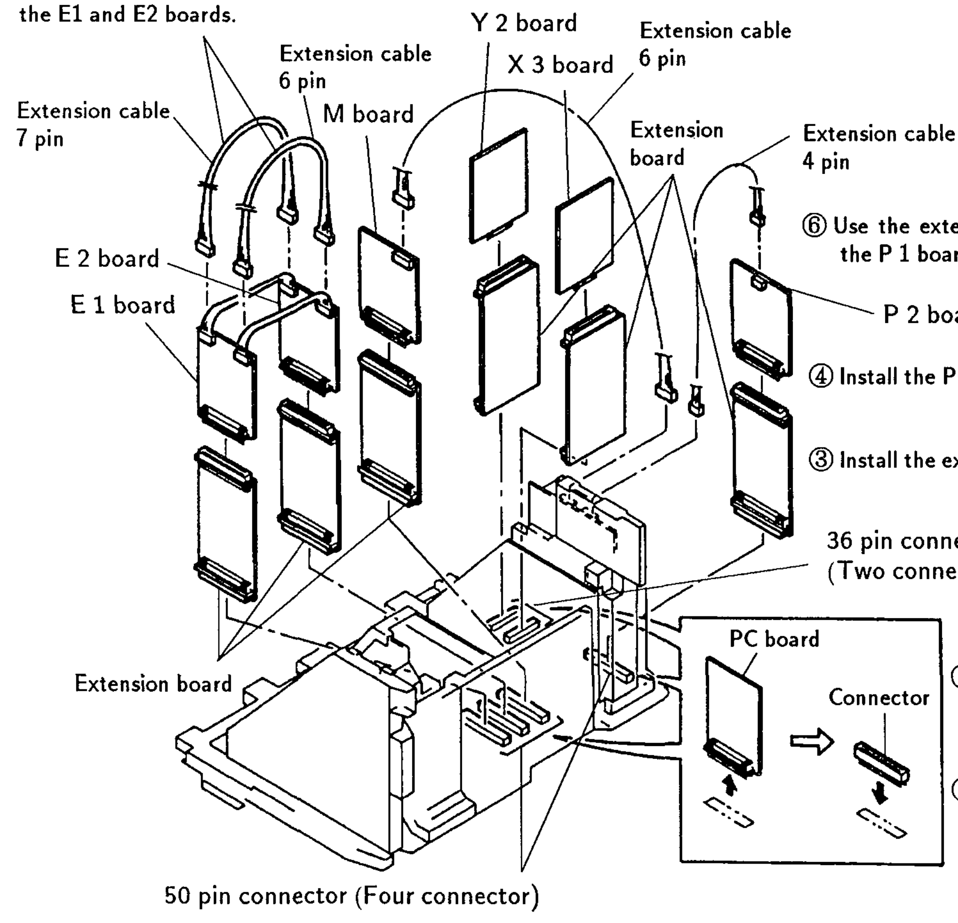
① Remove the board from the connector.

② Install the extension cable or extension board.

③ Install the board.


Exterior
Extension cable
4 pin
1-941-891-33
6 pin
1-941-891-31
7 pin
1-941-891-32
18 pin
3-702-558-01
3-702-557-01
10 pin
3-702-561-01
36 pin connector
3-702-560-01
50 pin connector
3-702-559-01
36/50 pin
36/50 pin
Extension board

⑤ Use the extension cable when checking the E1 and E2 boards.


Y 2 board
Extension cable
6 pin
X 3 board
Extension cable
6 pin
Extension cable
7 pin
M board
Extension board
Extension cable
4 pin
E 2 board
E 1 board
P 2 board
36 pin connector
(Two connector)
Extension board
PC board
Connector
50 pin connector (Four connector)

⑥ Use the extension cable when checking the P 1 board.

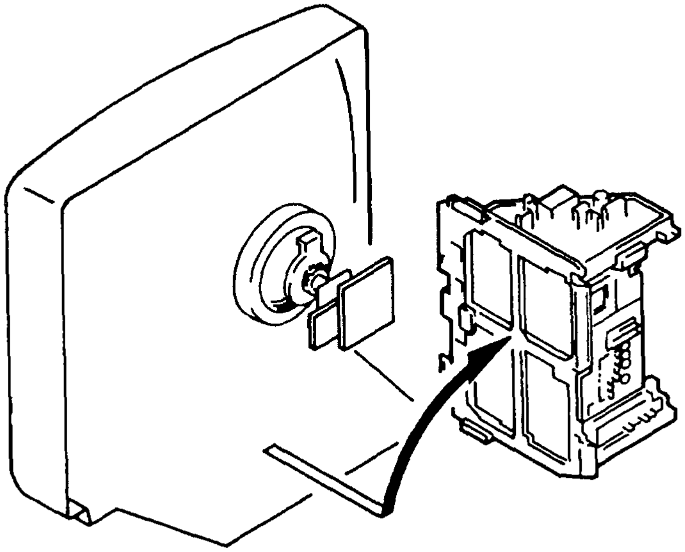
④ Install the PC board removed.

③ Install the extension board

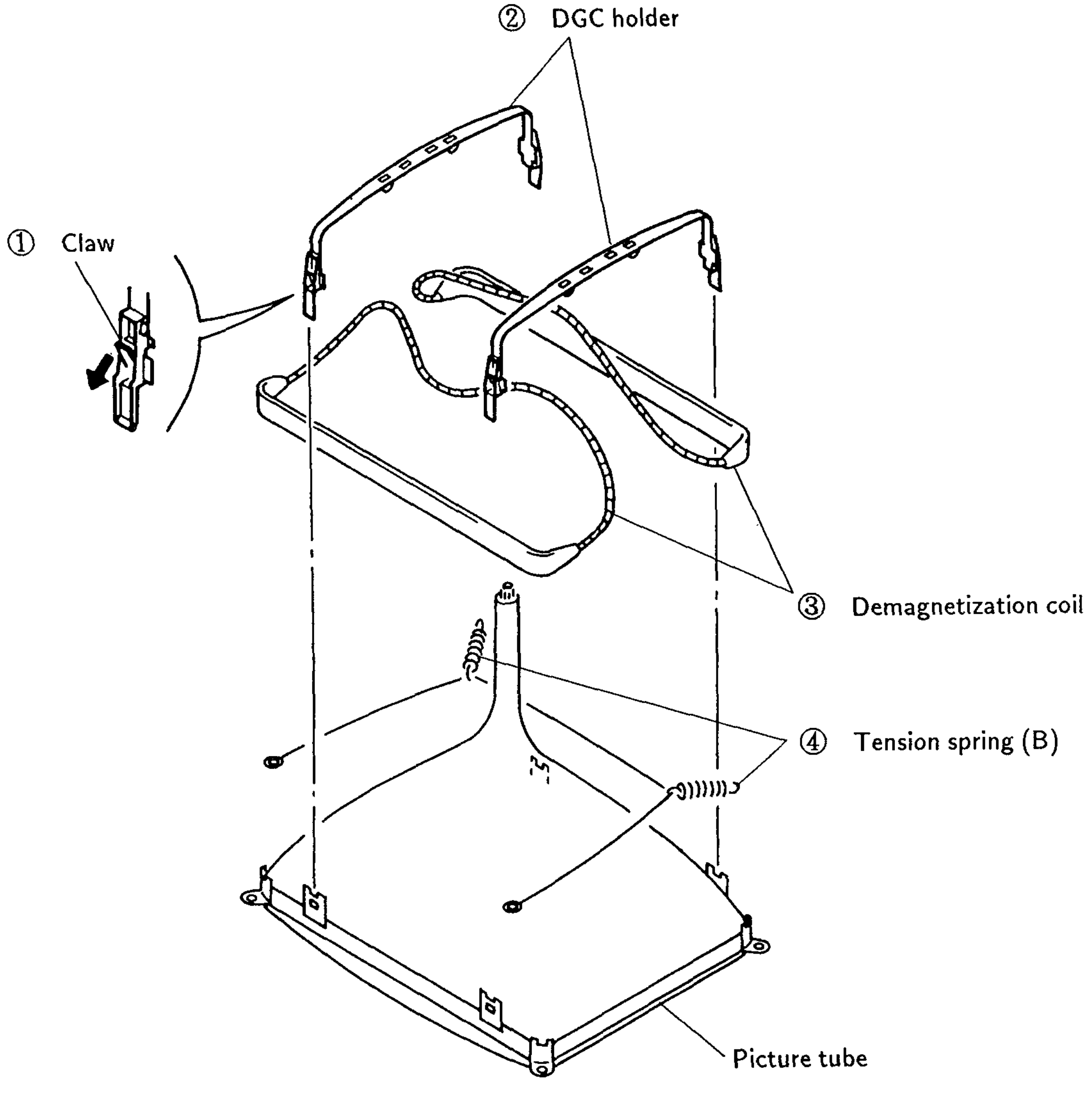
① De-solder the PC board and remove it.

② Solder the connector.

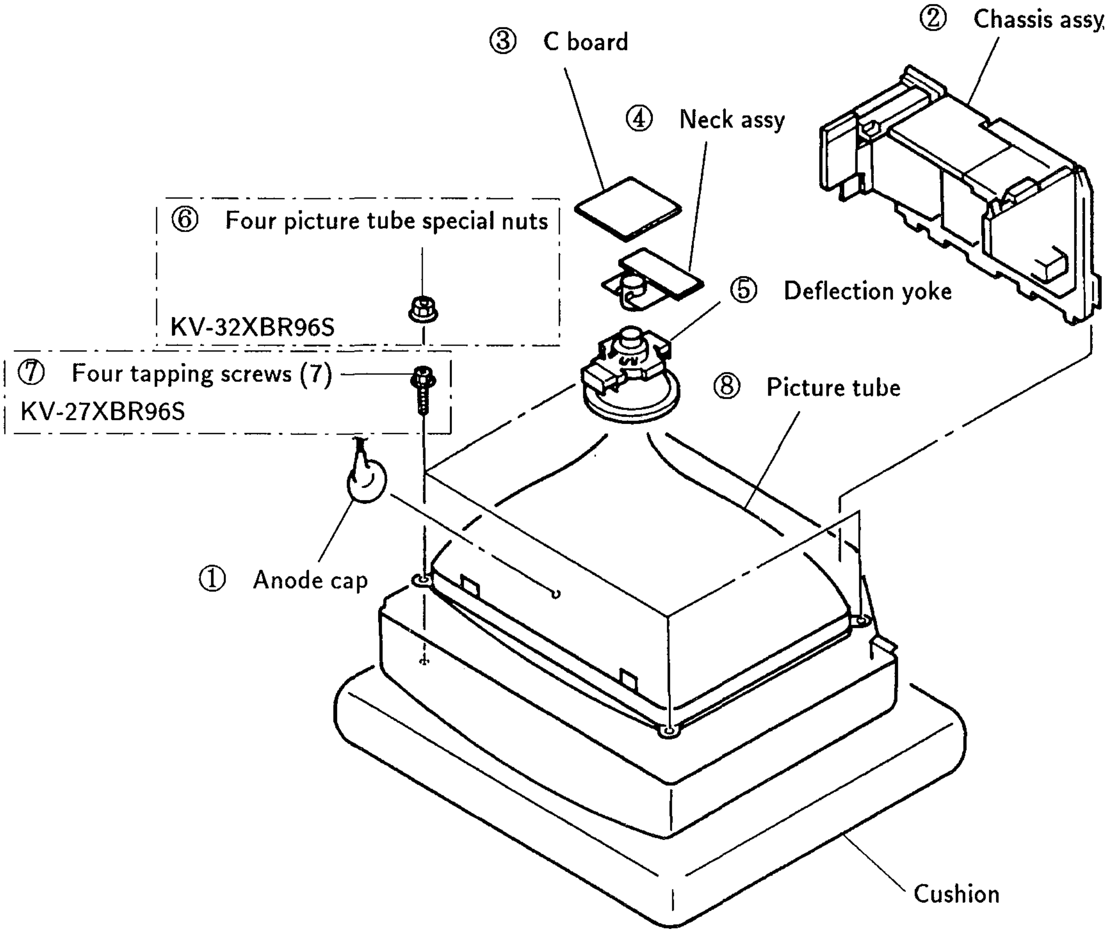
2-9. SERVICE POSITION



2-10. DEMAGNETIZATION COIL REMOVAL


② DGC holder
① Claw
③ Demagnetization coil
④ Tension spring (B)
Picture tube

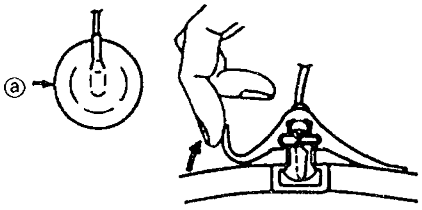
2-11. PICTURE TUBE REMOVAL


② Chassis assy
③ C board
④ Neck assy
⑥ Four picture tube special nuts
KV-32XBR96S
⑤ Deflection yoke
⑦ Four tapping screws (7)
KV-27XBR96S
⑧ Picture tube
① Anode cap
Cushion

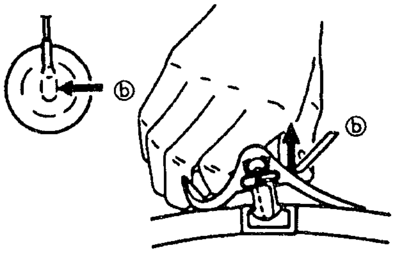
• REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

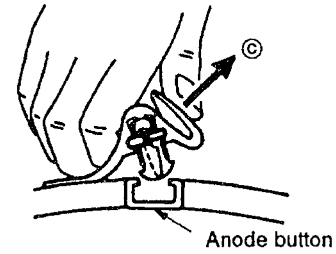
• REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.


ⓒ
Anode button

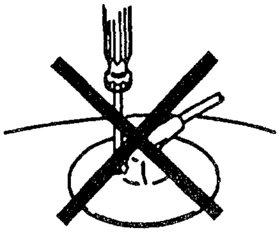
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

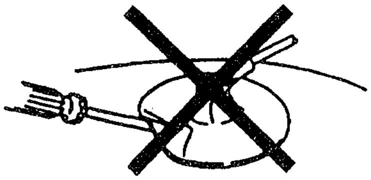
• HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with rated power supply voltage unless otherwise noted.

Controls and switch should be set as follows unless otherwise noted :

PICTURE control	RESET
BRIGHTNESS control	center

Preparations :
- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   Contrast } normal
   Bightness }
2. Position neck ass'y as shown in Fig 3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side.
   (See Figures 3-1 through 3-3.)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Figure 3-1.)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it.
   (See Figure 3-4.)

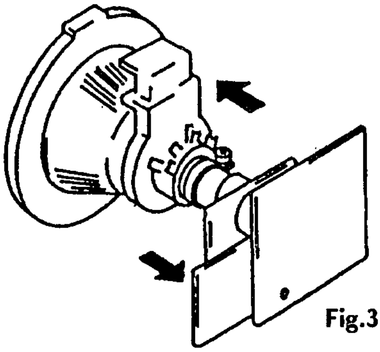


Fig.3-1

Perform the adjustments in order as follows :
1. Beam Landing
2. Convergence
3. Focus
4. White Balance

Note : Test Equipment Required.
1. Color-bar/Pattern Generator
2. Degausser
3. Oscilloscope

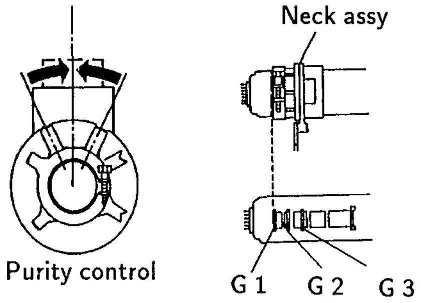

Neck assy
Purity control
G 1
G 2
G 3

Fig.3-2

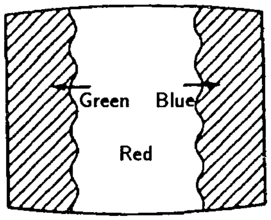

Green
Blue
Red

Fig.3-3

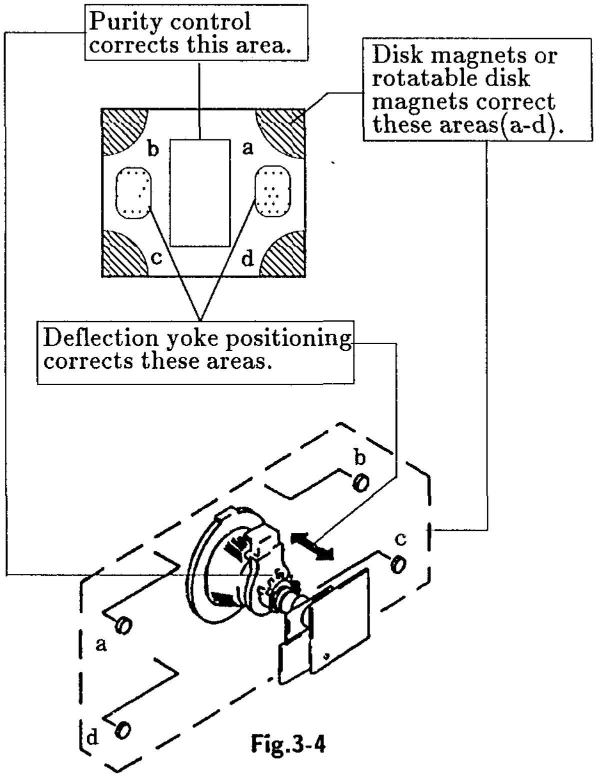

Purity control corrects this area.
Disk magnets or rotatable disk magnets correct these areas(a-d).
b
a
c
d
Deflection yoke positioning corrects these areas.
b
c
a
d

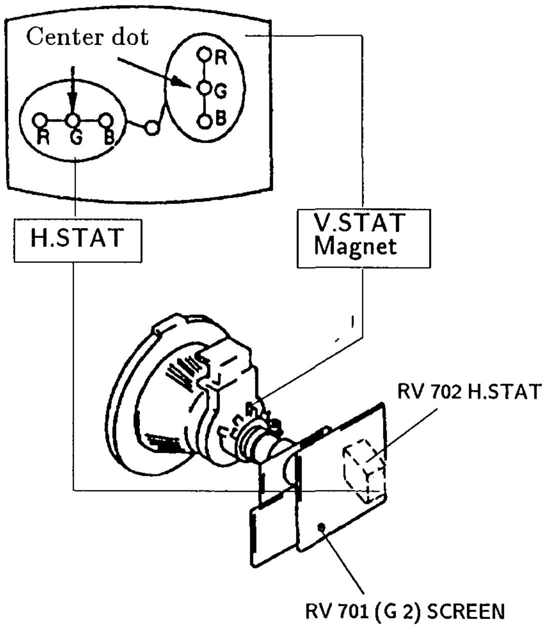
Fig.3-4

3-2. CONVERGENCE

Preparation :

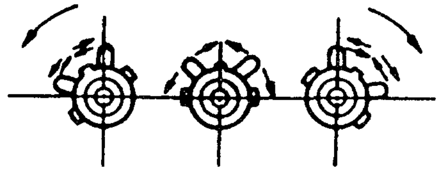
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) **Horizontal and Vertical Static Convergence**

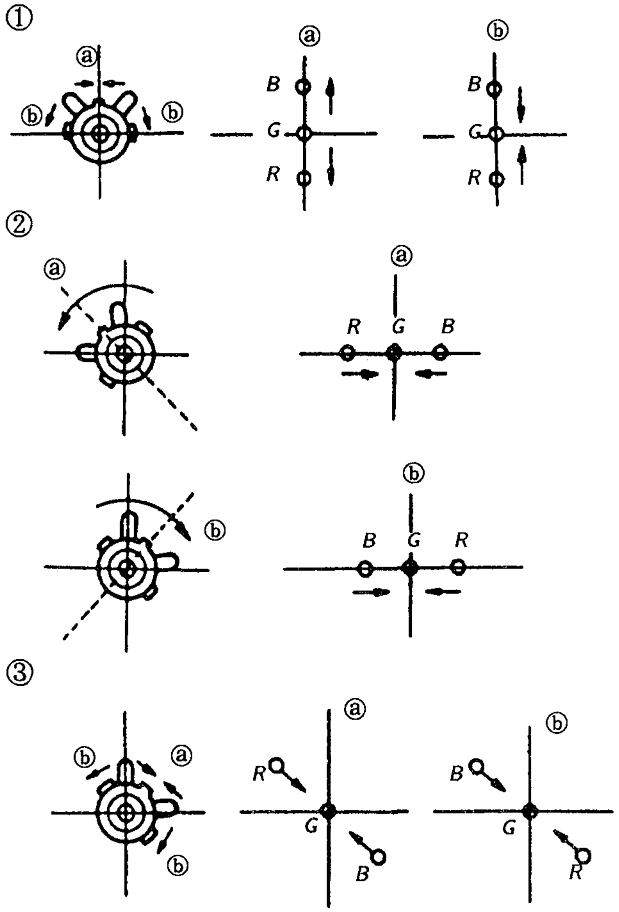


1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
   (In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

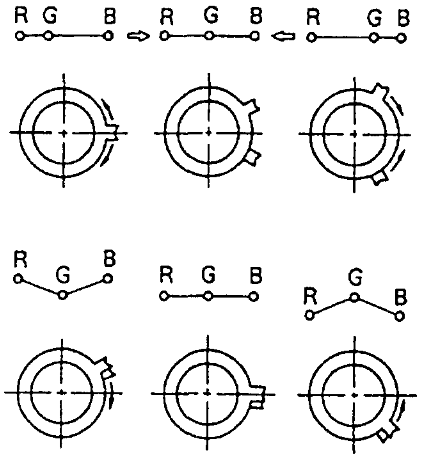
- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.



4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.



- Operation of BMC (Hexapole) Magnet


R G B
R G B
R G B
R G B
R G B
R G B

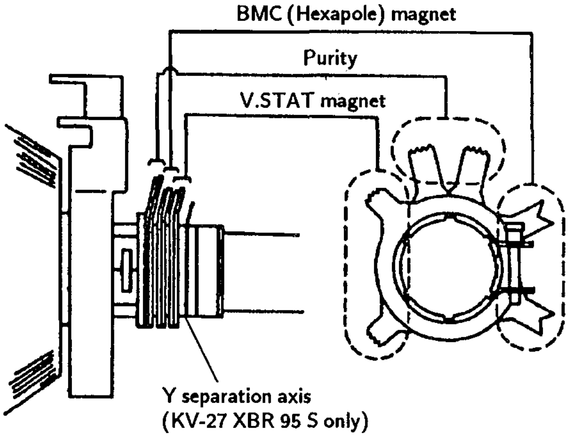
- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

(2) **Dynamic Convergence Adjustment**

Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

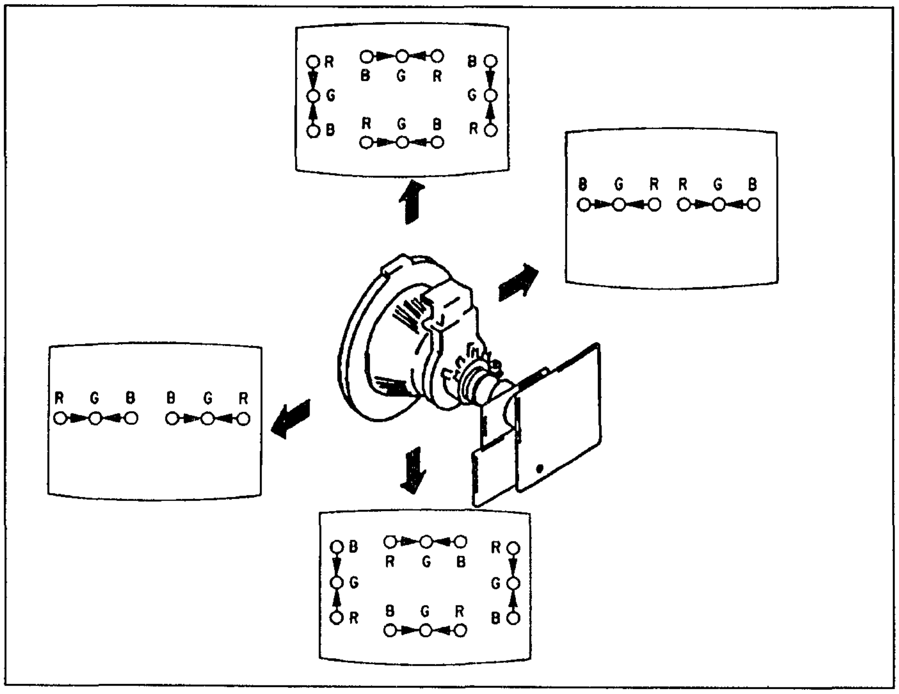
1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.


BMC (Hexapole) magnet
Purity
V.STAT magnet
Y separation axis
(KV-27 XBR 95 S only)

- **Y separation axis correction magnet adjustment**

1. Receive the cross-hatch signal, and adjust [PIX] to "MIN" and [BRT] to "standard".
2. Adjust the deflection yoke to the upright condition when it hits the CRT.
3. Adjust so that the Y separation axis correction magnet on the neck assembly is symmetrical at the top and bottom (open state).
4. Return the deflection yoke to its original position.

3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the defelection yoke spacer.


R G B B G R
R G B R G B
B G R R G B
R G B B G R
B G R R G B
B G R R G B

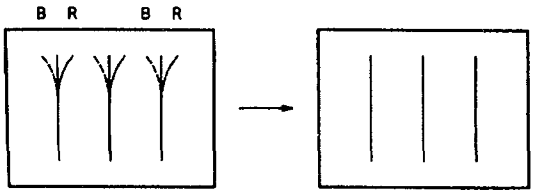
(3) Dynamic Convergence Circuit Adjustment

- Set to Service Mode.
- Input a cross-hatch signal.
- Press $\boxed{1}$ and $\boxed{4}$ serect an item of adjustments.
- Adjust $\boxed{3}$ and $\boxed{6}$ to the best picture.

ITEM	REFERENCE DATA	NAME REGISTER	
UYBO	39	VP	U. Y. BOW
LYBO	39	VP	L. Y. BOW
HAMP	26	VP	H. AMP
HTILT	36	VP	H. TILT
UCBO	20	VP	U. C. BOW
UTIL	44	VP	U. TILT
LCBO	31	VP	L. C. BOW
LTIL	63	VP	L. TILT
DCSH	19	VP	DC. SHIFT

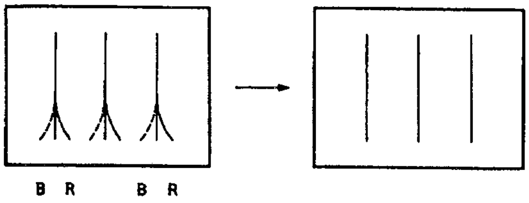
U. YBOW

Select UYBO with $\boxed{1}$ and $\boxed{4}$



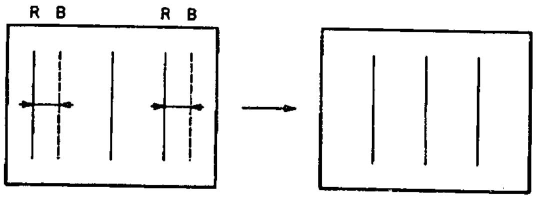
L. YBOW

Select LYBO with $\boxed{1}$ and $\boxed{4}$



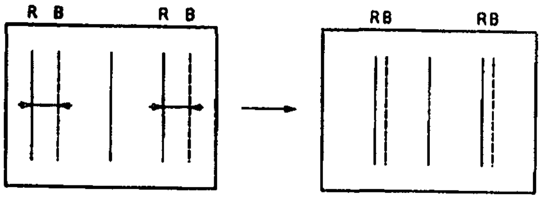
H. AMP

Select HAMP with $\boxed{1}$ and $\boxed{4}$



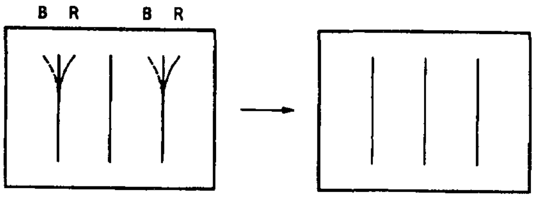
H. TILT

Select HTILT with $\boxed{1}$ and $\boxed{4}$



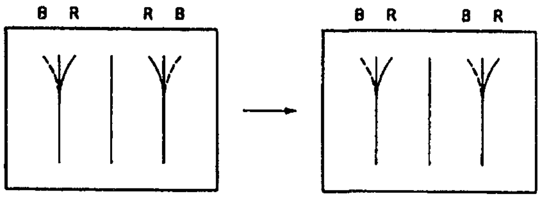
U. CBOW

Select UCBO with $\boxed{1}$ and $\boxed{4}$



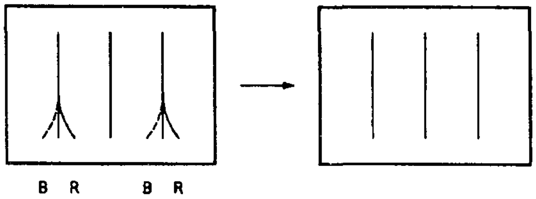
U. TILT

Select UTIL with $\boxed{1}$ and $\boxed{4}$



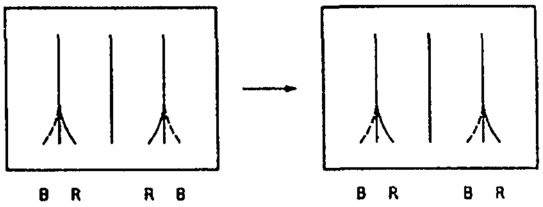
L. CBOW

Select LCBO with $\boxed{1}$ and $\boxed{4}$

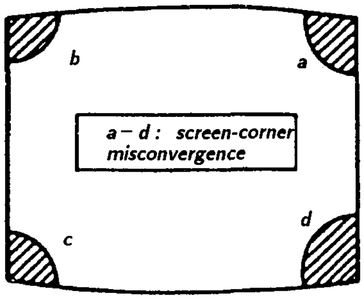


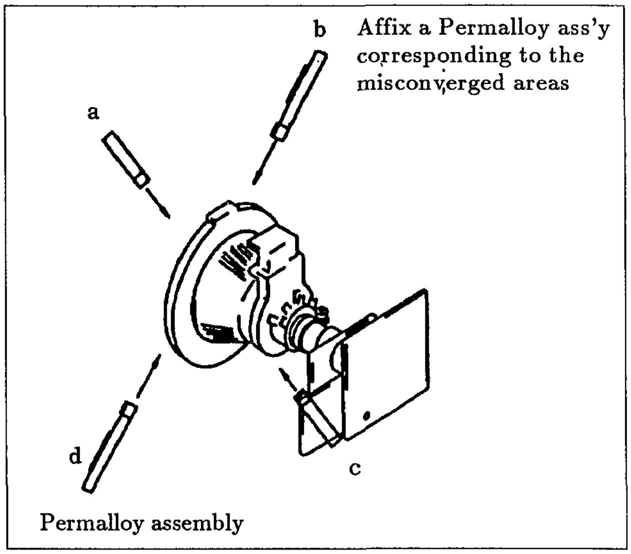
L. TILT

Select L. TIL with $\boxed{1}$ and $\boxed{4}$



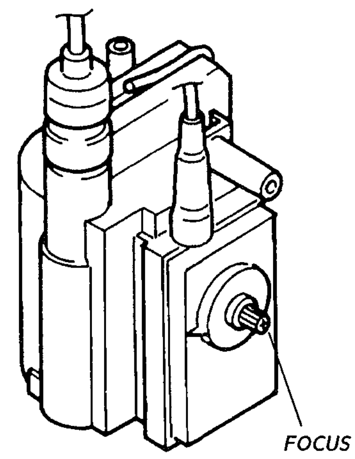
(4) Screen-corner Convergence


b
a
a – d : screen-corner misconvergence
c
d


b
Affix a Permalloy ass'y corresponding to the misconverged areas
a
d
c
Permalloy assembly

3-3. FOCUS ADJUSTMENT

Adjust FOCUS control on the flyback transformer for a best focus.



FLYBACK TRANSFORMER (T 501)

a. AN ITEM OF ADJUSTMENT

ITEM	REFERENCE DATA	NAME REGISTER	
GAMP	19	VP	GREEN AMP.
BAMP	9	VP	BLUE AMP.
GCUT	8	VP	GREEN CUT OFF.
BCUT	6	VP	BLUE CUT OFF
SBRT	40	VP	BRIGHT

b. METHOD OF CANCELLATION FROM SERVICE MODE

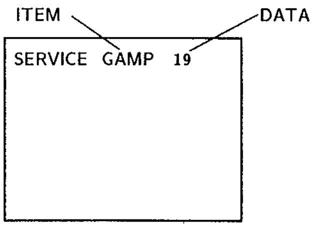
Set the standby condition (Press POWER button on the commander) in the next place, press POWER button again, hereupon it becomes TV mode.

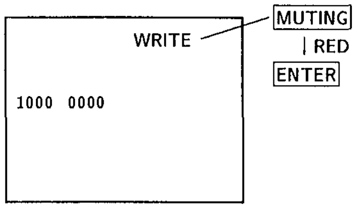
c. METHOD OF WRITE FOR MEMORY

1) Set to Service Mode.
2) Press 1 (UP) and 4 (DOWN), select an item of adjustments.
3) Press MUTING button indicate WRITE (RED) on screen.
4) Press ENTER button to write for memory.

d. MEMORY WRITE CONFIRMATION METHOD

1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again, confirm they were adjusted.





3-4. G2 (SCREEN) AND WHITE BALANCE ADJUSTMENTS

1. G 2 (SCREEN) ADJUSTMENT(RV 701)

1) Set the PICTURE and BRIGHTNESS to normal.
2) Confirm G 1 voltage is within 30.0±5 V.
3) Apply DC voltage of 180 V to the cathodes of R,G and B from DC stabilized power source.
4) While watching the picture, adjust the G2 control (RV 701) to the just the retrace line disappears.

(Using the Remote Commander)

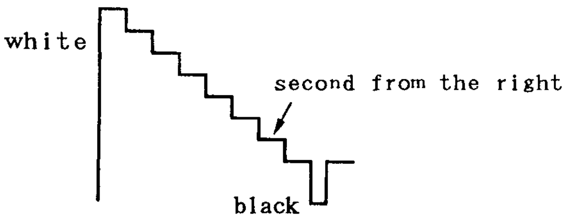
2. WHITE BALANCE ADJUSTMENTS

1) Set to service mode.
2) Press STANDARD to normal and if necessaries "TRINITONE" set to "LOW" by + or -.
3) Input an entire white signal.
4) Set the PICTURE to minimum.
5) Select S BRT with 1 and 4, and then set the level to minimum with 3 and 6.

6) Select G CUT and B CUT with 1 and 4. And adjust the level with 3 and 6 for the best white balance.
7) Set the PICTURE to maximum.
8) Select G AMP and B AMP with 1 and 4, and adjust the level with 3 and 6 for the best white balance.
9) Write into the memory by pressing MUTING → then ENTER.

3. SUB BRIGHT ADJUSTMENT

1) Set to service mode.
2) Input a staircase signal of black and white from the pattern generator.
3) BRIGHTNESS ··· RESET
PICTURE ········· minimum
4) Select SBRT with 1 and 4, and adjust SUB BRIGHT level with 3 and 6 so that the stripe second from the right is dimly lit.



SECTION 4
SAFETY RELATED ADJUSTMENTS

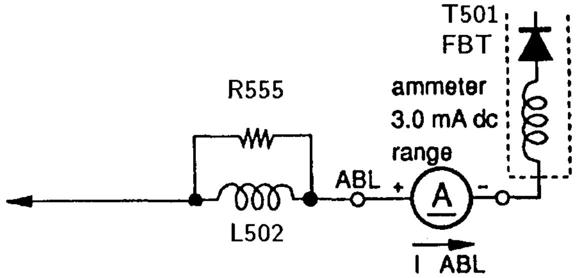
A BOARD

⧓ R565 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).
IC502,Q509,Q510,R565,R567,R568,R569

①

1. Preparation before confirmation
   1) Remove R651 on the G board and connect a variable resistor (RV1 : about 10kΩ) between pin ① of IC651 and B+ line.
   2) Supply 120±2.0V AC to with variable auto-transformer.
2. Hold-down operation confirmation
   1) Turn the POWER switch ON, and input an entirely white signals and adjust ABL current to 1910±50μA (27 in.) 1910±50μA (32 in.) with PICTURE and BRIGHT etc controls.
   2) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is less than 147.0V DC (27 in.) 147.0V DC (32 in.) whereby the raster disappears during operation of hold-down circuit.
      NOTE: When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.
   3) Turn the POWER switch ON, and input a dot signals and adjust ABL current to 110±30μA (27 in.) 110±30μA (32 in.) with PICTURE and BRIGHT etc controls.
   4) Increase B+ line voltage gradually by adjusting the resistor of RV1. Confirm that the minimum voltage is lower than 148.5V DC (27 in.) 148.5V DC (32 in.) whereby the raster disappears during operation of hold-down circuit.
      NOTE : When the Hold-down circuit starts operating, switch OFF the POWER of the set immediately.
3. Hold-down readjustment
   When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R565 (a component marked with ⧓).



A BOARD

⧓ R566 CONFIRMATION METHOD (HOLD-DOWN CONFIRMATION) AND READJUSTMENTS

The following adjustments should always be performed when replacing the following components (marked with ◪ on the schematic diagram).
IC502,IC651,Q509,Q510,D502,C531,R554,R566,R567,R568,R569,R651,R1506,T501

②

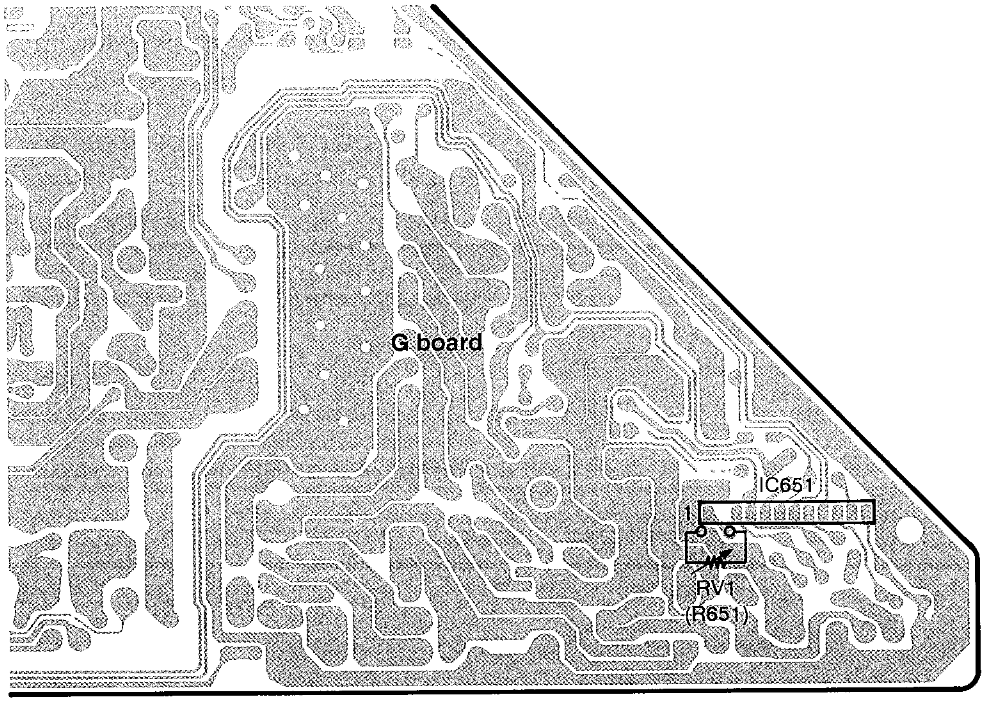
1. Preparation before confirmation
   1) Turn the POWER switch ON, and input an entirely white signals and set the PICTURE and BRIGHT controls to maximum.
   2) Confirm that voltage of the check terminal of pin② of A-0 connector is more than 127.0V DC (27 in.) 127.0V DC (32 in.) when the set is operating normally with 120.0±2.0V AC supply.
2. Hold-down operation confirmation
   1) Turn the POWER switch ON, and input an entirely white signals and set the PICTURE and BRIGHT controls to maximum.
   2) Apply DC voltage of over 130±2.0V DC gradually to the check terminal of pin ② of A-0 connector via 1SS119 from the DC stabilized power source.
      Confirm that the minimum voltage is lower than 149.0V DC (27 in.) 149.0V DC (32 in.) whereby the raster disappears during operation of hold-down circuit.
      NOTE : When the hold-down circuit starts operating, switch OFF the POWER of the set immediately.
3. Hold-down readjustment
   When step 2 is not satisfied, readjustment should be performed by altering the resistance value of R566 CARBON 1/4W (a component marked with ⧓).

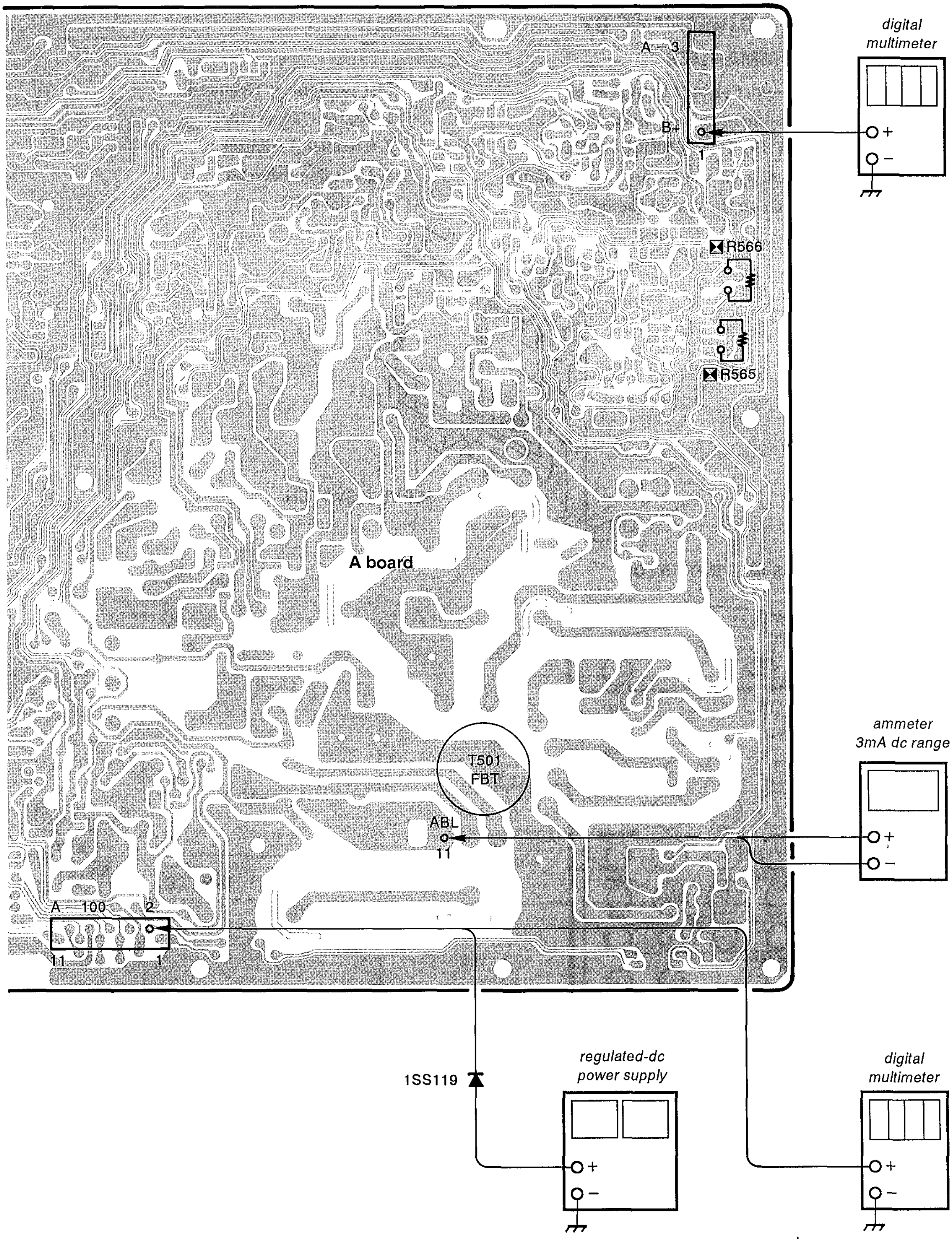
G BOARD

B+ VOLTAGE CONFIRMATION

The following adjustments should always be performed when replacing IC651 and R651.

1) Supply $130\pm^{2}_{0}$V AC to with variable autotransformer.
2) Input an entirely monoscope signal.
3) Set the PICTURE control and the BRIGHT controls in to initial reset.
4) Confirm the voltage of A BOARD ① pin A-3 connecter is less than 136.5V DC.
5) If step 4) is not satisfied, replace IC651 and R651 repeat above steps.




digital
multimeter
A – 3
B+
1
R566
R565
A board
T501
FBT
ABL
11
ammeter
3mA dc range
A – 100
2
11
1
1SS119
regulated-dc
power supply
digital
multimeter

SECTION 5
CIRCUIT ADJUSTMENTS

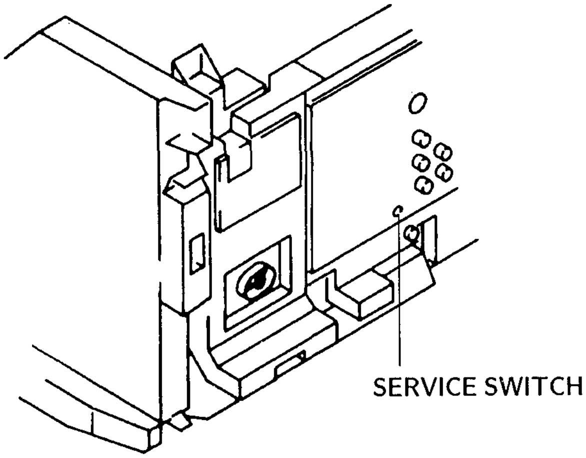
5-1. ELECTRICAL ADJUSTMENT BY REMOTE COMMANDER

Use of Remote Commander (RM-Y114A) can be performed circuit adjustments about this model.

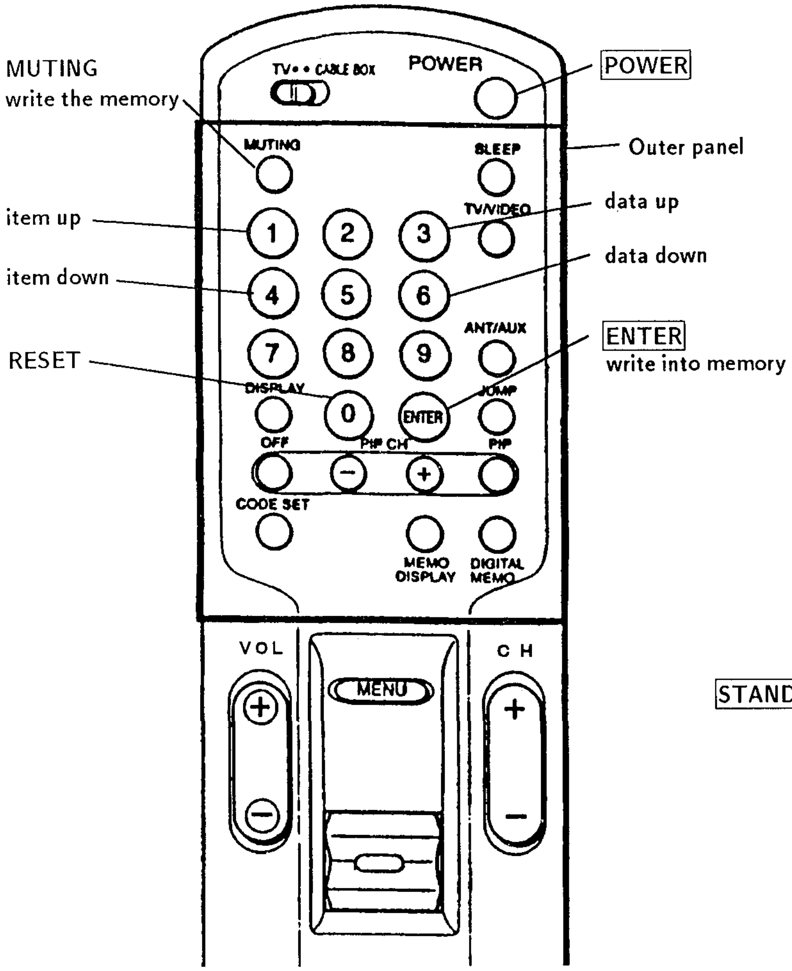
NOTE : Test Equipment Required.
1. Pattern Generator
2. Frequency counter
3. Digital multimeter
4. Audio OSC

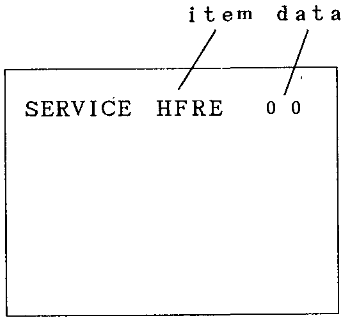
1. METHOD OF SETTING THE SERVICE MODE

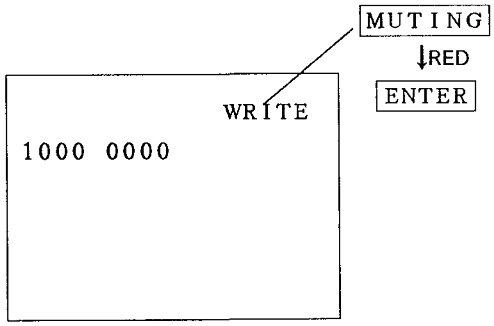
1) Press POWER button on the Remote Commander while pressing switch on the rear of the set.


SERVICE SWITCH

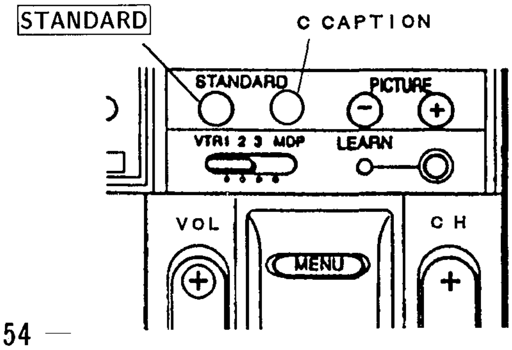
2. ADJUST BUTTONS AND INDICATOR


MUTING
write the memory
item up
item down
RESET
POWER
Outer panel
data up
data down
ENTER
write into memory
TV• • CABLE BOX
POWER
MUTING
SLEEP
TV/VIDEO
1
2
3
4
5
6
7
8
9
ANT/AUX
DISPLAY
0
ENTER
JUMP
OFF
PIP CH
PIP
CODE SET
MEMO DISPLAY
DIGITAL MEMO
VOL
MENU
CH


item
data
SERVICE HFRE 00


MUTING
↓RED
ENTER
WRITE
1000 0000

Inner panel


STANDARD
C CAPTION
STANDARD
PICTURE
VTR1 2 3 MDP
LEARN
VOL
MENU
CH

3. AN ITEM OF ADJUSTMENT

ITEM	REFERENCE DATA	NAME REGISTER	
AFC	1	VP	AFC 1.0
HFRE	93	VP	H. FREQUENCE
VFRE	15	VP	V. FREQUENCE
VPOS	19	VP	V. SHIFT
VSIZ	32	VP	V. SIZE
VLIN	2	VP	V. LINEARITY
VSCO	3	VP	VS. CORRECTION
HPOS	9	VP	H. PHASE
HSIZ	25	VP	H. SIZE
PAMP	17	VP	PIN. AMP.
CPIN	4	VP	CORNER PIN
PPHA	8	VP	PIN. PHASE
VCOM	2	VP	V. COMP
GAMP	19	VP	GREEN AMP.
BAMP	9	VP	BLUE AMP.
GCUT	8	VP	GREEN CUT OFF.
BCUT	6	VP	BLUE CUT OFF
SPIX	40	VP	PICTURE
SHUE	29	VP	HUE
SCOL	30	VP	COLOR
SBRT	40	VP	BRIGHT
RGBP	28	VP	RGB PICTURE
SHAP	7		SHARPNESS
DISP	35		OUTPUT
VSMO	0	VP	VSMO
REF	2	VP	REF 1.0
ROFF	1	VP	OFF NR
GOFF	1	VP	OFF NG
BOFF	1	VP	OFF NB
ABLM	0	VP	ABLM
DRGB	1	VP	D RGB
YBOW	31	DE	Y BOW
VANG	35	DE	V. ANGLE
HTAP	31	DE	H. TRAP
TEST	0	AP	T
MPX	7	AP	ATT
FILO	31	AP	I 1
DEEM	7	AP	I 2
STEV	31	AP	OSC 1
SAPV	31	AP	OSC 2
PILO	7	AP	PILOT
SEP	31	AP	WIDE BAND
VD	7	AP	SPECTRAL
LVOL	0	AP	VOLUME-L
RVOL	0	AP	VOLUME-R
BASS	7	AP	BASS
TRE	7	AP	TREBLE
UYBO	39	DC	U.Y. BOW
LYBO	39	DC	L.Y. BOW
HAMP	26	DC	H.AMP
HTIL	36	DC	H TILT
UCBO	20	DC	U.C. BOW
UTIL	44	DC	U.TILT
LCBO	31	DC	L.C. BOW
LTIL	63	DC	L.TILT
DCSH	19	DC	DC. SHIFT
PHPO	34	PI	READ DELAY H
PVPO	8	PI	READ DELAY V
PLEV	14	PI	PICTURE LEVEL
PFCO	11	PI	FRAME COLOR
NRLE	30		NR LEVEL
DSPP	31		

→ Nothing change for KV-27XBR96S/32XBR96S

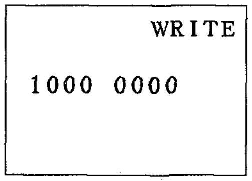
4. METHOD OF CANCELLATION FROM SERVICE MODE

Set the standby condition (Press POWER button on the commander) in the next place, press POWER button again, hereupon it becomes TV mode.

5. METHOD OF WRITE FOR MEMORY

1) Set to Service Mode.
2) Press 1 (UP) and 4 (DOWN), select an item of adjustments.
3) Press MUTING button indicate WRITE (RED) on screen.
4) Press ENTER button to write for memory.

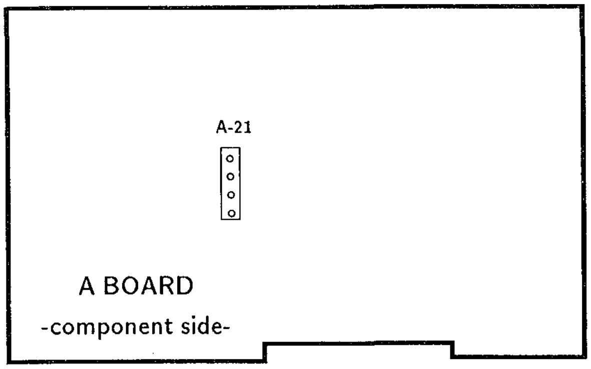
6. MEMORY WRITE CONFIRMATION METHOD



```
WRITE
1000 0000
```

1) After adjustment, pull out the plug from AC outlet, and next place, plug in AC outlet again.
2) Turn the power switch ON and set to Service Mode.
3) Call the adjusted items again, confirm they were adjusted.

5-2. A BOARD ADJUSTMENTS



RF AGC ADJUSTMENT(IF BLOCK VR)

1) Input a color-bar signal.
2) Adjust AGC VR of TU 101 so that snow noise and cross-modulation disappear from the picture.
3) Confirm them at every channel.

H.FREQUENCY ADJUSTMENT (HFRE)

1) Set to Service Mode.
2) Input a color-bar signal.
3) Connect a frequency counter to base of Q 507.
4) Call the item of AFC, set to 3 level (free run).
5) Select HFRE with 1 and 4.
6) Adjust 3 and 6 to the 15735± 60 Hz level.
7) Call the item of AFC again, adjust the level" 01 ".
8) Write into the memory by pressing MUTING → then ENTER.

V.FREQUENCY ADJUSTMENT (VFRE)

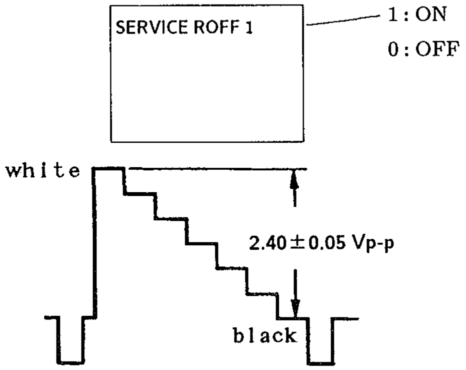
1) Set the Service Mode.
2) Input an off-air signal (VIDEO IN → no signal).
3) Connect the frequency counter across connector VDY − ⊕ of DY-1 connector and ground.
4) Select VFRE with 1 and 4.
5) Adjust 3 and 6 to the 56 ±0.5 Hz.
6) Write the memory by pressing MUTING → then ENTER .

SUB CONTRAST ADJUSTMENT (SPIX)

1) Set to Service Mode.
2) Input a color-bar signal. (75 IRE)
3) Set the conditions as follows.

PICTURE ·········	MAX
COLOR ·········	MIN
BRIGHT ·········	MIN
R OFF ·········	ON
G OFF ·········	OFF
B OFF ·········	OFF

Press MENU and select VIDEO MENU → - (L) (It becomes minimum).
Select 3 (ON) and 6 (OFF) with 1 and 4.

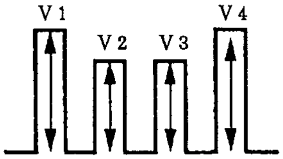


4) Connect an oscilloscope to TP 49 B of C board and ground.
5) Adjust 3 and 6 to the 2.40± 0.05 Vp-p level by select-ing SPIX with 1 and 4.
6) Write the memory by pressing MUTING → then ENTER .
7) Return the following back to normal after adjustment.

G OFF ·········	ON
B OFF ·········	ON
COLOR ·········	CENTER
BRIGHT ·········	CENTER
PICTURE ·········	80%

SUB HUE, SUB COLOR ADJUSTMENT (SHUE, SCOL)

1) Input a color-bar signal.
2) Press STANDARD to normal.
3) Set to Service Mode.
4) Connect an oscilloscope to TR 49 R of C board and ground.
5) Adjust 3 and 4 to the V1=V4 and V2=V3 by select to SHUE and SCOL with 1 and 4.

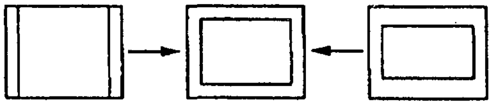


6) Write into the memory by pressing MUTING →then ENTER .

V.SIZE ADJUSTMENT (VSIZ)

1) Set to Service Mode.
2) Press STANDARD to normal.
3) Input a cross-hatch signal.
4) Adjust 3 and 6 to the best vertical size by selecting VSIZ with 1 and 4 .
5) Write into the memory by pressing MUTING →then ENTER .

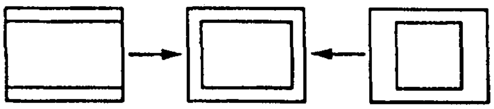
V SIZE (VSIZ)



H.SIZE ADJUSTMENT (HSIZ)

1) Input a cross-hatch signal.
2) Press STANDARD to normal.
3) Set to Service Mode.
4) Adjust 3 and 6 to best horizontal size by selecting HSIZ with 1 and 4.
5) Write into the memory by pressing MUTING →then ENTER .

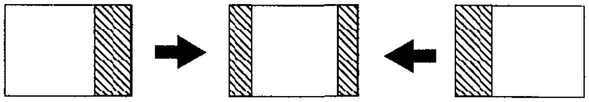
H SIZE (HSIZ)



H.CENTER ADJUSTMENT (H POS)

Note: Perform this adjustment after H.FREQUENCY ADJUSTMENT (HFRE) .

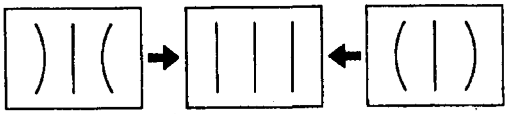
1) Input a color bar signal.
2) Set the Service mode.
3) Select HSIZ with 1 and 4 .
4) Press 6 so that the Horizontal size set to min.
5) Adjust A-21 conector position so that both-size branking width of the Raster should be same on the Scrnne.
6) Unplug Set then plug in Set.
7) Set to Service mode.
8) Select HPOS with 1 and 4 .
9) Adjust 3 and 6 so that the color bars center should be set to the CRT Screen center position.
10) White into the memory by the pressing MUTING → then ENTER .



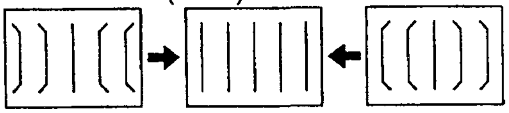
PIN AMP (PAMP) , CORNER PIN (CPIN) PIN PHASE (PPHA), H TRAPIZOID (HTRA) V LINEARITY (VLIN), V ANGLE (VANG), VS CORRECTION (VSCO), Y BOW (YBOW), V SHIFT (VPOS), AND V COMP (VCOM) ADJUSTMENTS

1) Input a cross-hatch signal.
2) Press STANDARD to normal.
3) Set to Service Mode.
4) Select PAMP, CPIN, PPHA, H TRA, VPOS, VCOM, LVIN, VANG, VSCO and YBOW with 1 and 4.
5) Adjust 3 and 6 to the best picture.
6) Write the memory by MUTING → ENTER.

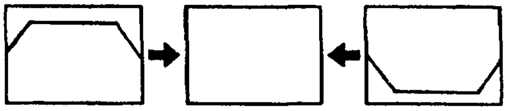
PIN AMP (PAMP)



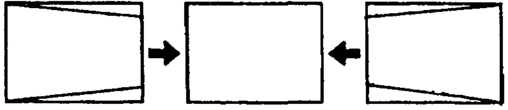
CORNER PIN (CPIN)



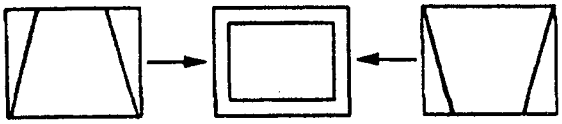
PIN PHASE (PPHA)



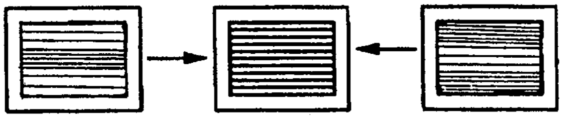
H TRAPIZOIDO (HTRA)



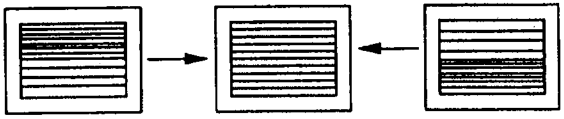
V-SHIFT (VPOS)



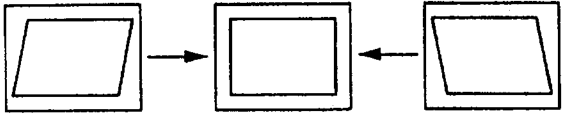
V COMP (VCOM)



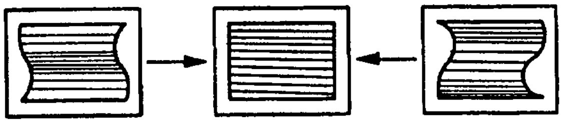
V LINEARITY (VLIN)



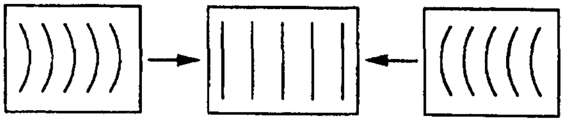
V ANGLE (VANG)



VS CORRECTION (VSCO)

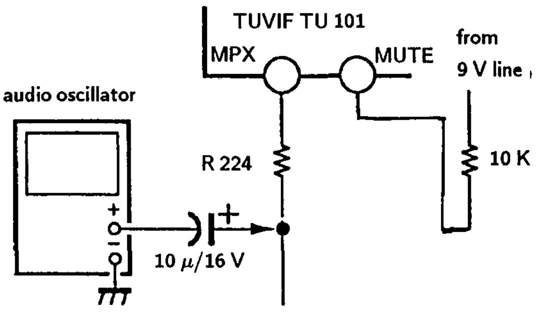


Y BOW (Y BOW)



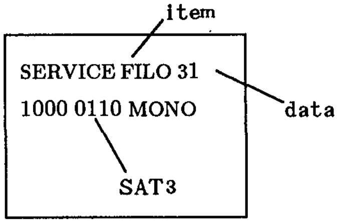
FILTER ADJUSTMENT (MPX, FILO)

1) Set to Service Mode.
2) Select to TEST with 1 and 4, set the data to "1". Then select MPX and change data to "08" .
3) Connect an audio oscillator to R224 using a capacitor (10μ F/16V), set frequency to 62.936 kHz ± 0.1 kHz.
And then, through the 10kΩ resistor, feed 9.0V into the mute of TUVIF TU 101.


TUVIF TU 101
MPX
MUTE
from
9 V line
audio oscillator
R 224
10 K
+
10 μ/16 V

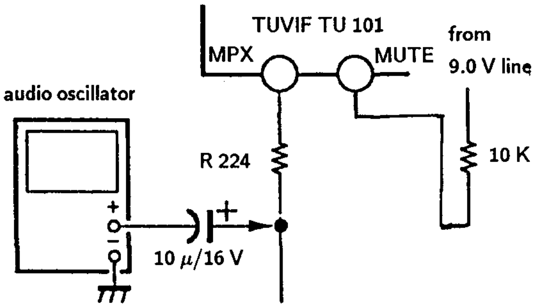
V 4 fh : SINE-WAVE 62.936 KHz ± 0.1 KHz
LEVEL 3.0 Vp-p

4) Make the data "00" by selecting FILO with 1 and 4 And then, send up the data gradually by pressing 6 . Set the data to D1 before SAT3 changing to 1 from 0.
5) Send up the data gradually. Set data D2 when SAT3 changes 0 from 1.
6) Adjust the data of FILO to $\frac{D1+D2}{2}$.
7) Write into the memory by pressing MUTING → then ENTER .


item
SERVICE FILO 31
1000 0110 MONO
data
SAT3

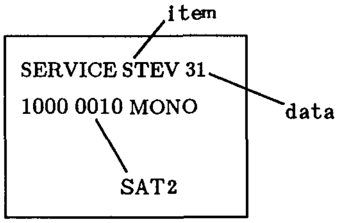
ST VCO ADJUSTMENT (MPX, STEV)

1) Set to Service Mode.
2) Select TEST with 1 and 4 , set the data to "1". And then press MTS to MONO.
3) Select MPX, set the data "8" .
4) Connect an audio oscillator to R 224 using electrolytic capacitor (10μ F/16V) and appply the frequency V_{ST}. Then, apply DC voltage to mute of TUVIF TU 101 using 10kΩ connect to 9.0 V line.


TUVIF TU 101
MPX
MUTE
from
9.0 V line
audio oscillator
R 224
10 K
+
10 μ/16 V

Vfh : SINE-WAVE 15.734 KHz ± 0.1 KHz
LEVEL 0.28 Vp-p

5) Select STEV with 1 and 4, set the data to "00" with 6. And then, send up the data gradually. Set the data to D1 before SAT2 changes from 0 to 1.
6) Send up data gradually, set the data to D2 when SAT2 changes 1 from 0.
7) Adjust the data of STEV to
8) Write into the memory by pressing MUTING → then ENTER .



MPX IN LEVEL ADJUSTMENT (MPX)

1) Set to Service Mode.
2) Select TEST with $\boxed{1}$ and $\boxed{4}$, set the data to "0" with $\boxed{6}$. And then press $\boxed{\text{MTS}}$ to MONO.
3) Select MPX with $\boxed{1}$ and $\boxed{4}$, set the data to "08" with $\boxed{3}$ and $\boxed{6}$.
4) Write into the memory by pressing $\boxed{\text{MUTING}}$ → then $\boxed{\text{ENTER}}$.

PILOT CANCEL ADJUSTMENT (PILO)

1) Set to the Service Mode.
2) Select PILO with $\boxed{1}$ and $\boxed{4}$, set the data to "08" with $\boxed{3}$ and $\boxed{6}$.
3) Write into the memory by pressing $\boxed{\text{MUTING}}$ → then $\boxed{\text{ENTER}}$.

SAP VCO f_0 ADJUSTMENT (SAPV)

1) Set to Service Mode.
2) Input a stereo broadcast signal with SAP.
3) Select TEST with $\boxed{1}$ and $\boxed{4}$, set the data to "0" . And then, press $\boxed{\text{MTS}}$ to MAIN.
4) Connect a digital multimeter to TP-1(DBX). This voltage reading will equal V 1.
5) Press MTS to SAP and this voltage will equal V 2.
6) Select SAPV with $\boxed{1}$ and $\boxed{4}$, adjust $\boxed{3}$ and $\boxed{6}$ so that V 2=V 1±0.03 VDC.
7) Write the memory by $\boxed{\text{MUTING}}$ → $\boxed{\text{ENTER}}$.

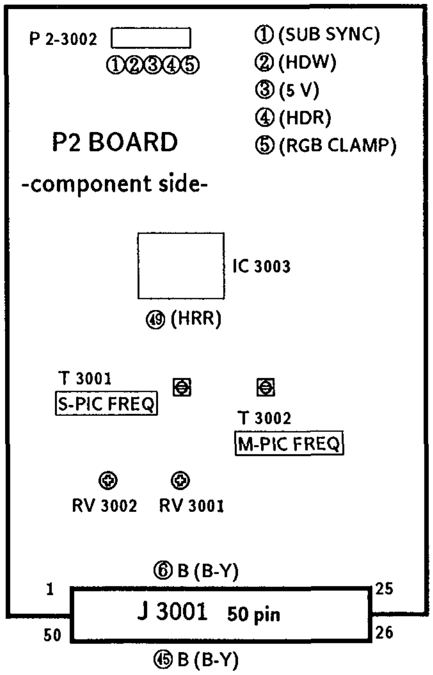
SEPARATION ADJUSTMENT (SEP)

1) Set to Service Mode.
2) Press $\boxed{\text{MTS}}$ to MAIN and receive a monoral broad-cast signal.

In the next step, receive a stereo broadcast signal.

3) Select SEP and VD with $\boxed{1}$ and $\boxed{4}$, adjust $\boxed{3}$ and $\boxed{6}$ so that a clear stereo sound is effected.

5-3. P2 BOARD ADJUSTMENTS



MAIN-PICTURE FREQUENCY (T 3002)

1) Set PIP mode.
2) Connect a frequency counten to Pin ⑪ (HDW) of J3001.
3) Connect a frequency counten to Pin ㊾ or ㊿ (HRR) of IC3003 or Pin ⑤ (RGB CLAMP) of P2-3002.
4) Short the circuit between Pin ④ (HDR) of P2-3002 and Pin ③ (5V) of P2-3002.
5) Turn T3002 CLK (P) for the following frequency at Pin ㊾ or ㊿ (HRR) of IC3003 or at Pin ⑤ (RGB CLAMP) of P2-3002.

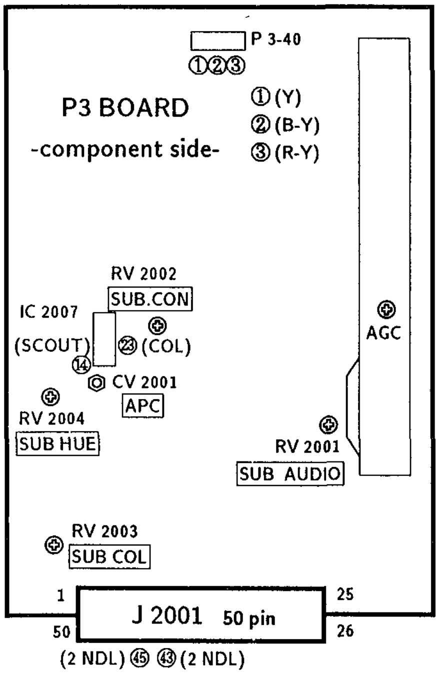
15.734 kHz ± 10 Hz

SUB-PICTURE FREQUENCY (T 3001)

1) Set PIP mode.
2) Connect a frequency counten to Pin ⑪ (HDW) of J 3001.
3) Connect a frequency counten to Pin ㊾ or ㊿ (HRR) of IC 3003 or Pin ⑤ (RGB CLAMP) of P 2-3002.
4) Short the circuit between Pin ① (SUB SYNC) of P 2-3002 and Pin ③ (5 V) of P 2-3002.
5) Turn T 3001 CLK (C) for the following frequency at Pin ② (HDW) of P 2-3002.

15.734 kHz ± 10 Hz

5-4. P3 BOARD ADJUSTMENTS


P 3-40
①②③
P3 BOARD
-component side-
①(Y)
②(B-Y)
③(R-Y)
RV 2002
SUB.CON
IC 2007
(SCOUT)
㉓(COL)
⑭
CV 2001
APC
AGC
RV 2004
SUB HUE
RV 2001
SUB AUDIO
RV 2003
SUB COL
1
J 2001 50 pin
25
50
26
(2 NDL) ㊺ ㊸ (2 NDL)

RF AGC ADJUSTMENT(IF BLOCK VR)

1) Input a color-bar signal.
2) Set to PICTURE IN PICTURE mode.
3) Adjust AGC VR of TU 2001 so that snow noise and cross-modulation disappear from the picture.
4) Confirm them at every channel.

SUB PICTURE SOUND VOLUME LEVEL (SUB AUDIO) ADJUSTMENT(RV2001)

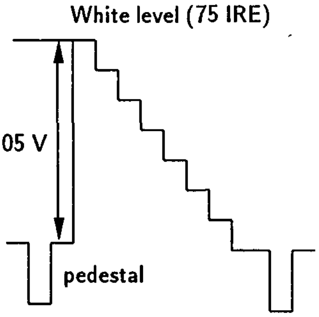
1) Receine an audio signal of 400 Hz. (100% mod.)
2) Adjust RV 2001 for the following level at Pin ㊸ (2 NDR) or Pin ㊺ (2 NDL) of J 2001.

500 mVrms ± 2 dB

SUB CONT ADJUSTMENT (RV 2002)

1) Obtain the color bar signal on the sub-screen.
2) Obsene at Pin ① (Y OUT) of P 3-42 on an oscilloscope.
Odjust RV 2002 for the following lenel between the white level and pedestal one.

0.65 ± 0.05 Vp-p


White level (75 IRE)
0.65 ± 0.05 V
pedestal

SUB COLOR ADJUSTMENT(RV 2003)

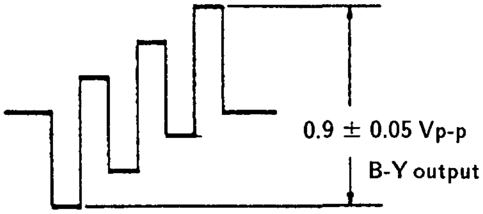
1) Obtain the color bar signal on the sub-screen in the mode of PIP size 1/4.
2) Reset color.
3) Adjust RV 2003 for the following level, obseruing an oscilloscope connectod to Pin ② (B-Y) of P3-40 (Fig. 1)

0.9 ± 0.05 Vp-p (B-Y)

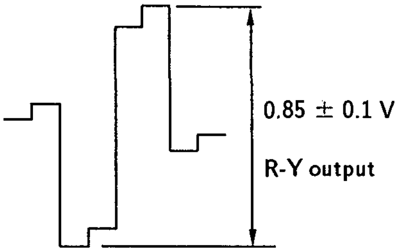
4) Adjust RV 2003 for the following level, obseruing an oscilloscope connectod to Pin ③ (R-Y) of P3-40 (Fig. 2)

0.85 ± 0.1 Vp-p (R-Y)

5) Adjust traxking between sub color and sub hue.


0.9 ± 0.05 Vp-p
B-Y output

(Fig. 1)

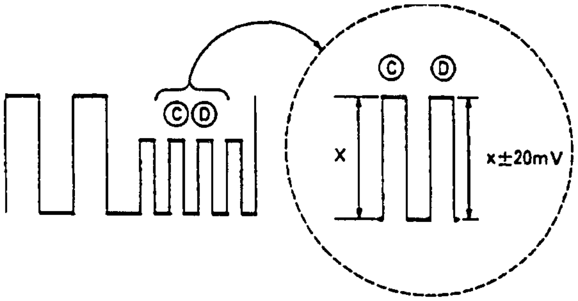

0.85 ± 0.1 V
R-Y output

(Fig. 2)

SUB HUE ADJUSTMENT(RV 2004)

1) Obtain the color bar signal on the sub-screen in the mode of PIP size 1/4.
2) Reset hue.
3) Obserne the signal at Pin ⑥ or Pin ㊺ of J 3001 on P 2 board on an oscilloscope and make adjustment to obtain the following level.

D : X ± 20 mV

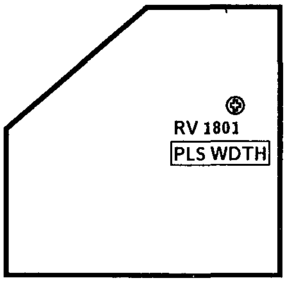


APC ADJUSTMENT(CV 2001)

Connect Pin ㉓ (COL) of IC 2007 fo ground and connect a frequency cound fo Pin ⑭ (SCOUT) fo obtain the following level.

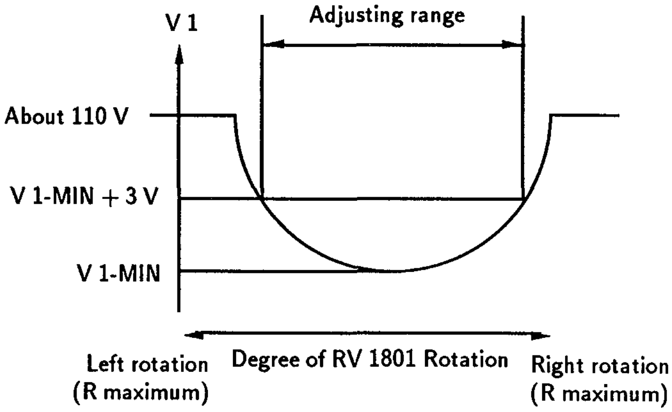
3579545 ± 40 Hz

5-5. VC BOARD ADJUSTMENT



DRIVE PULSE PHASE ADJUSTMENT(RV 1801)

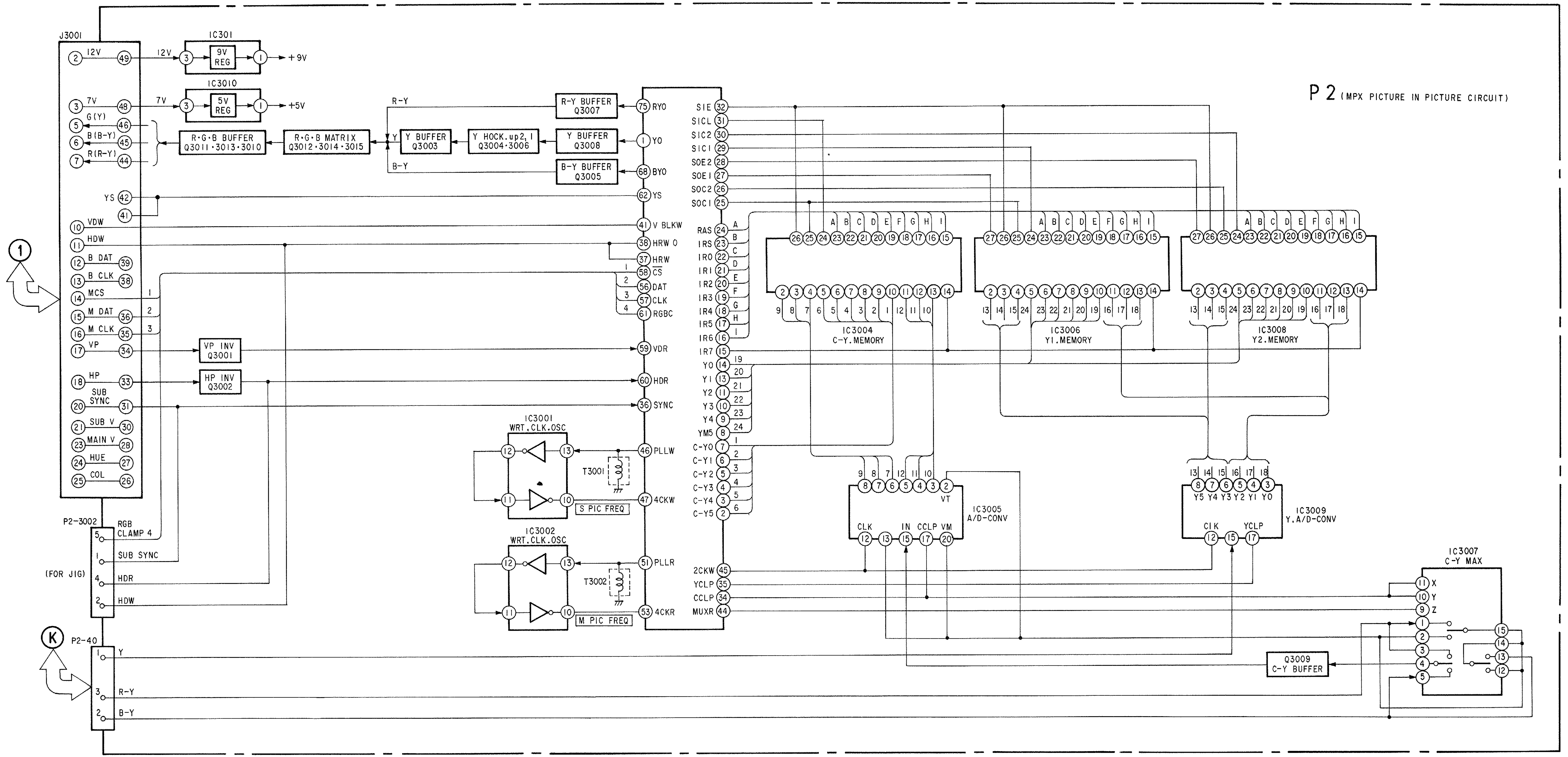
1) While measuring the voltage V 1 at both edges of C 1809, rotate RV 1801 so that it becomes minimum. The adjusting range is from (the voltage at which V 1 becomes minimum) V 1 MIN to 3 V, which means, adjust to between V 1 MIN to V 1 MIN + 3 V.



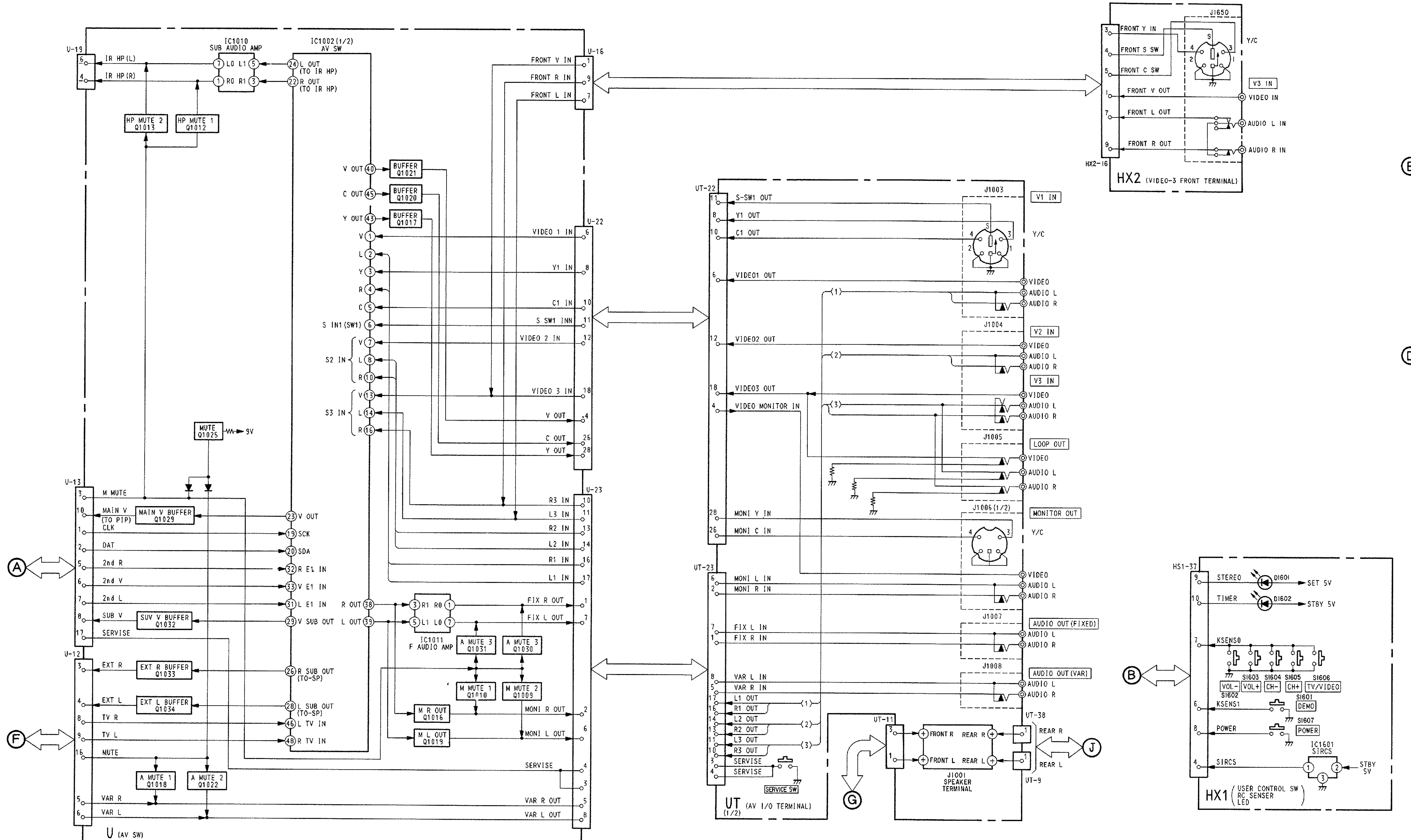
MEMO

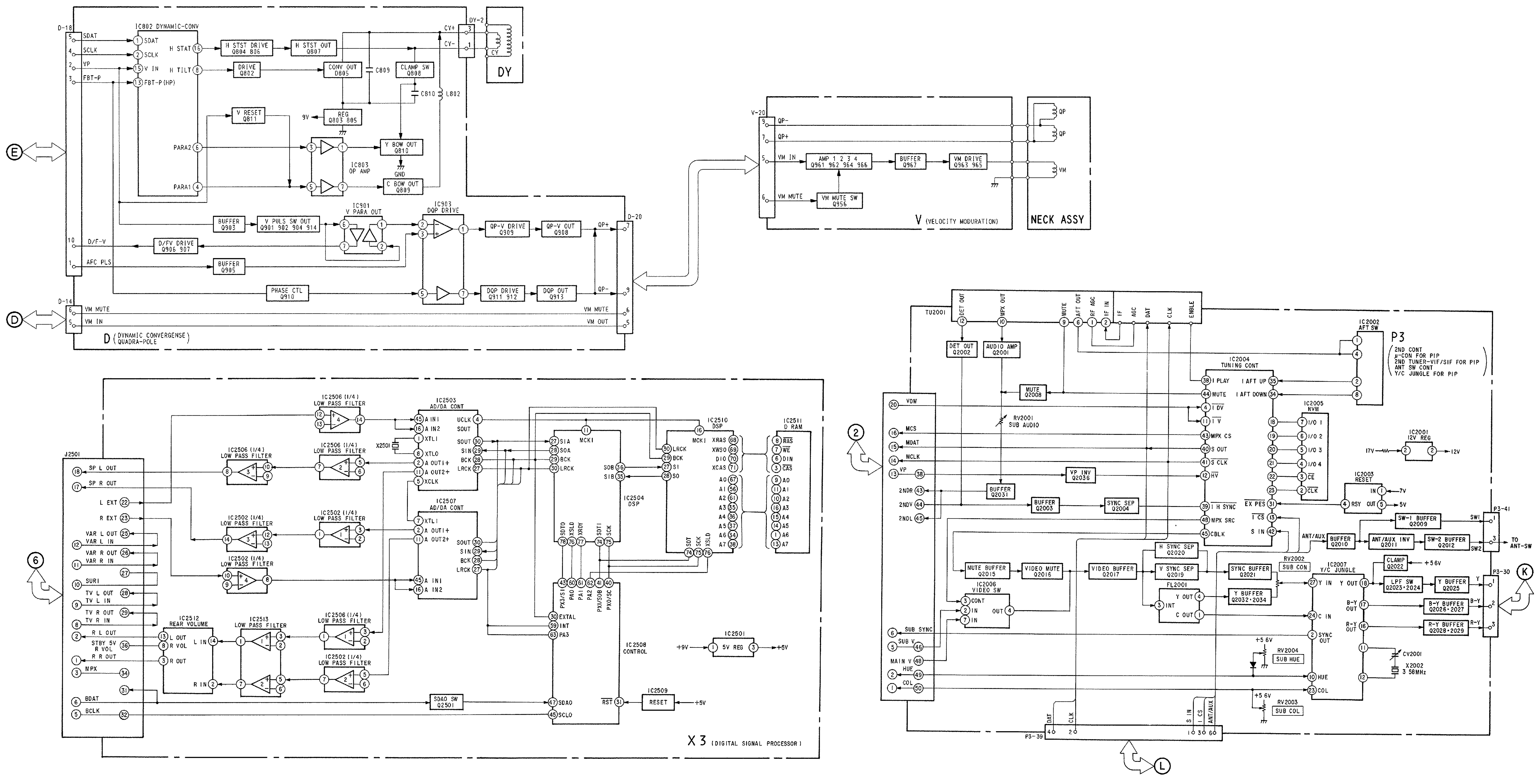
SECTION 6
DIAGRAMS

6-1.BLOCK DIAGRAM (1)

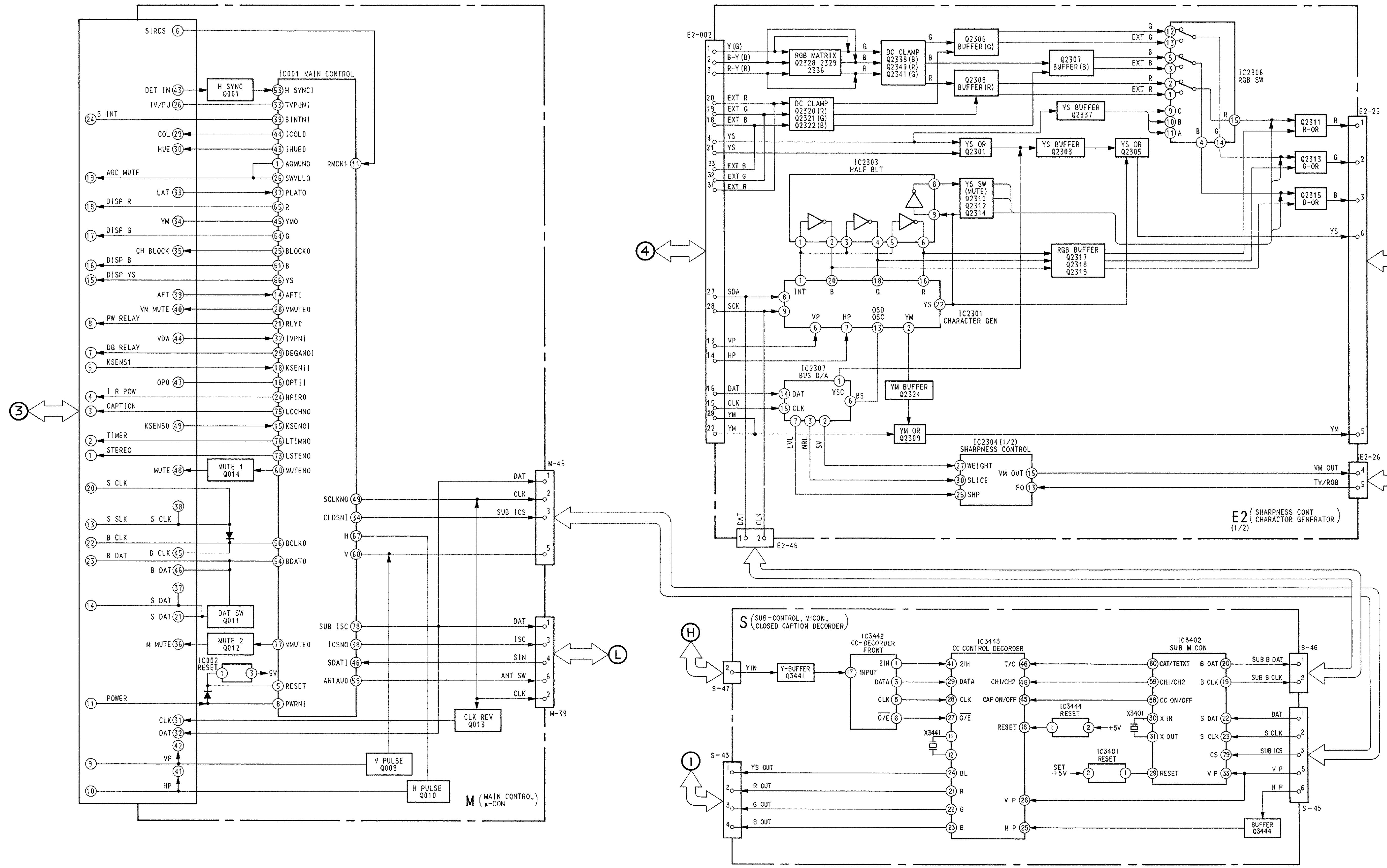

P 2 (MPX PICTURE IN PICTURE CIRCUIT)
J3001
12V
7V
G(Y)
B(B-Y)
R(R-Y)
YS
VDW
HDW
B DAT
B CLK
MCS
M DAT
M CLK
VP
HP
SUB SYNC
SUB V
MAIN V
HUE
COL
①
IC301
9V REG
+9V
IC3010
5V REG
+5V
R·G·B BUFFER Q3011·3013·3010
R·G·B MATRIX Q3012·3014·3015
Y BUFFER Q3003
Y HOCK.up2,1 Q3004·3006
R-Y
B-Y
R-Y BUFFER Q3007
Y BUFFER Q3008
B-Y BUFFER Q3005
VP INV Q3001
HP INV Q3002
IC3001 WRT.CLK.OSC
T3001
S PIC FREQ
IC3002 WRT.CLK.OSC
T3002
M PIC FREQ
RYO
YO
BYO
YS
V BLKW
HRW 0
HRW
CS
DAT
CLK
RGBC
VDR
HDR
SYNC
PLLW
4CKW
PLLR
4CKR
SIE
SICL
SIC2
SIC1
SOE2
SOE1
SOC2
SOC1
RAS
IRS
IR0
IR1
IR2
IR3
IR4
IR5
IR6
IR7
Y0
Y1
Y2
Y3
Y4
YM5
C-Y0
C-Y1
C-Y2
C-Y3
C-Y4
C-Y5
2CKW
YCLP
CCLP
MUXR
IC3004 C-Y.MEMORY
IC3006 Y1.MEMORY
IC3008 Y2.MEMORY
IC3005 A/D-CONV
VT
CLK
IN
CCLP
VM
IC3009 Y.A/D-CONV
Y5 Y4 Y3 Y2 Y1 Y0
CIK
YCLP
IC3007 C-Y MAX
X
Y
Z
Q3009 C-Y BUFFER
P2-3002
RGB CLAMP 4
SUB SYNC
HDR
HDW
(FOR JIG)
Ⓚ
P2-40
Y
R-Y
B-Y

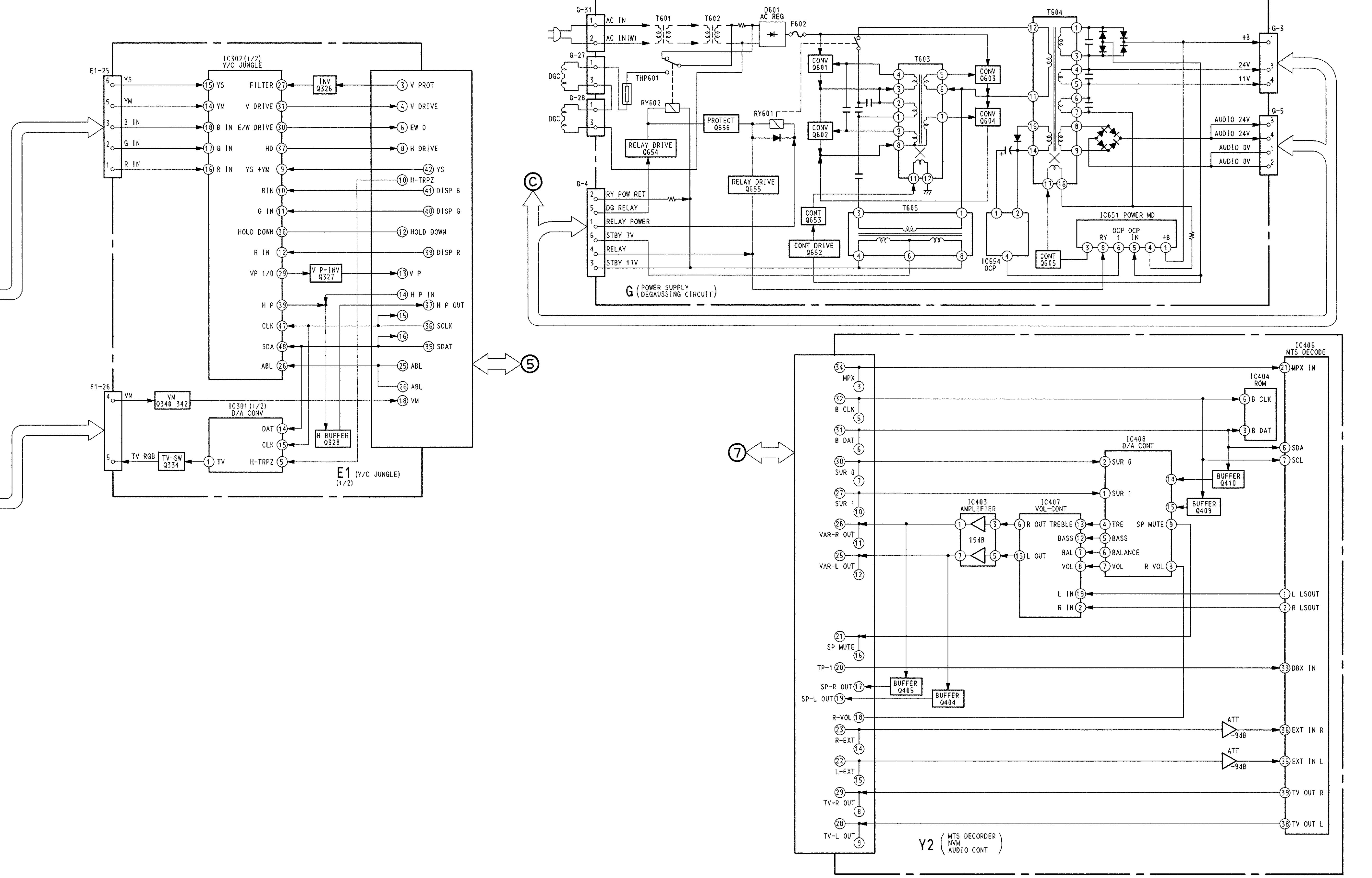
6-2.BLOCK DIAGRAM (2)


IC1010 SUB AUDIO AMP
IC1002 (1/3) AV SW
HP MUTE 2 Q1033
HP MUTE 1 Q1012
MUTE Q1025
MAIN V BUFFER Q1029
SUV V BUFFER Q1032
EXT R BUFFER Q1033
EXT L BUFFER Q1034
A MUTE 1 Q1018
A MUTE 2 Q1022
IC1011 F AUDIO AMP
U (AV SW) (1/2)
UT (AV I/O TERMINAL) (1/2)
J1001 SPEAKER TERMINAL
SERVICE SW
HX2 (VIDEO-3 FRONT TERMINAL)
HX1 (USER CONTROL SW, RC SENSOR, LED)
V1 IN
V2 IN
V3 IN
LOOP OUT
MONITOR OUT
AUDIO OUT (FIXED)
AUDIO OUT (VAR)
STEREO
TIMER
SET 5V
STBY 5V
A
B
F
G
J


IC802 DYNAMIC-CONV
H STAT DRIVE Q804 806
H STAT OUT Q807
DRIVE Q802
CONV OUT Q805
CLAMP SW Q808
V RESET Q811
IC803 DP AMP
V BOW OUT Q812
C BOW OUT Q803
BUFFER Q903
V PULS SW OUT
IC901 V PARA OUT
IC902 DQP DRIVE
DQP-V DRIVE Q909
DQP-V OUT Q908
D/F DRIVE Q906 907
BUFFER Q905
PHASE CTL Q910
DQP DRIVE Q911 912
DQP OUT Q913
D (DYNAMIC CONVERGENSE, QUADRA-POLE)
DY
AMP 1 2 3 4
BUFFER Q957
VM DRIVE Q963 965
VM MUTE SW Q956
V (VELOCITY MODURATION)
NECK ASSY
IC2506 LOW PASS FILTER
IC2503 AD/DA CONV
IC2507 AD/DA CONV
IC2504 DSP
IC2510 DRAM
IC2511 D RAM
IC2512 REAR VOLUME
IC2513 LOW PASS FILTER
IC2508 CONTROL
IC2501 5V REG
IC2509 RESET
X3 (DIGITAL SIGNAL PROCESSOR)
TU2001
DET OUT Q2002
AUDIO AMP Q2001
MUTE Q2008
IC2004 TUNING CONT
IC2005 RVM
IC2002 AFT SW
P3
IC2001 12V REG
IC2003 RESET
BUFFER Q2031
BUFFER Q2003
VP INV Q2036
SYNC SEP Q2006
SW-1 BUFFER Q2009
ANT/AUX INV Q2011
SW-2 BUFFER Q2012
MUTE BUFFER Q2015
VIDEO MUTE Q2016
VIDEO BUFFER Q2017
H SYNC SEP Q2022
V SYNC SEP Q2019
SYNC BUFFER Q2021
IC2006 VIDEO SW
IC2007 Y/C JUNGLE
CLAMP Q2022
LPF SW Q2023-2024
Y BUFFER Q2025
B-Y BUFFER Q2026-2027
R-Y BUFFER Q2028-2029
FL2001
SUB HUE
SUB COL
X2002 3.58MHz
C
D
E
K
L

6-3.BLOCK DIAGRAM (3)

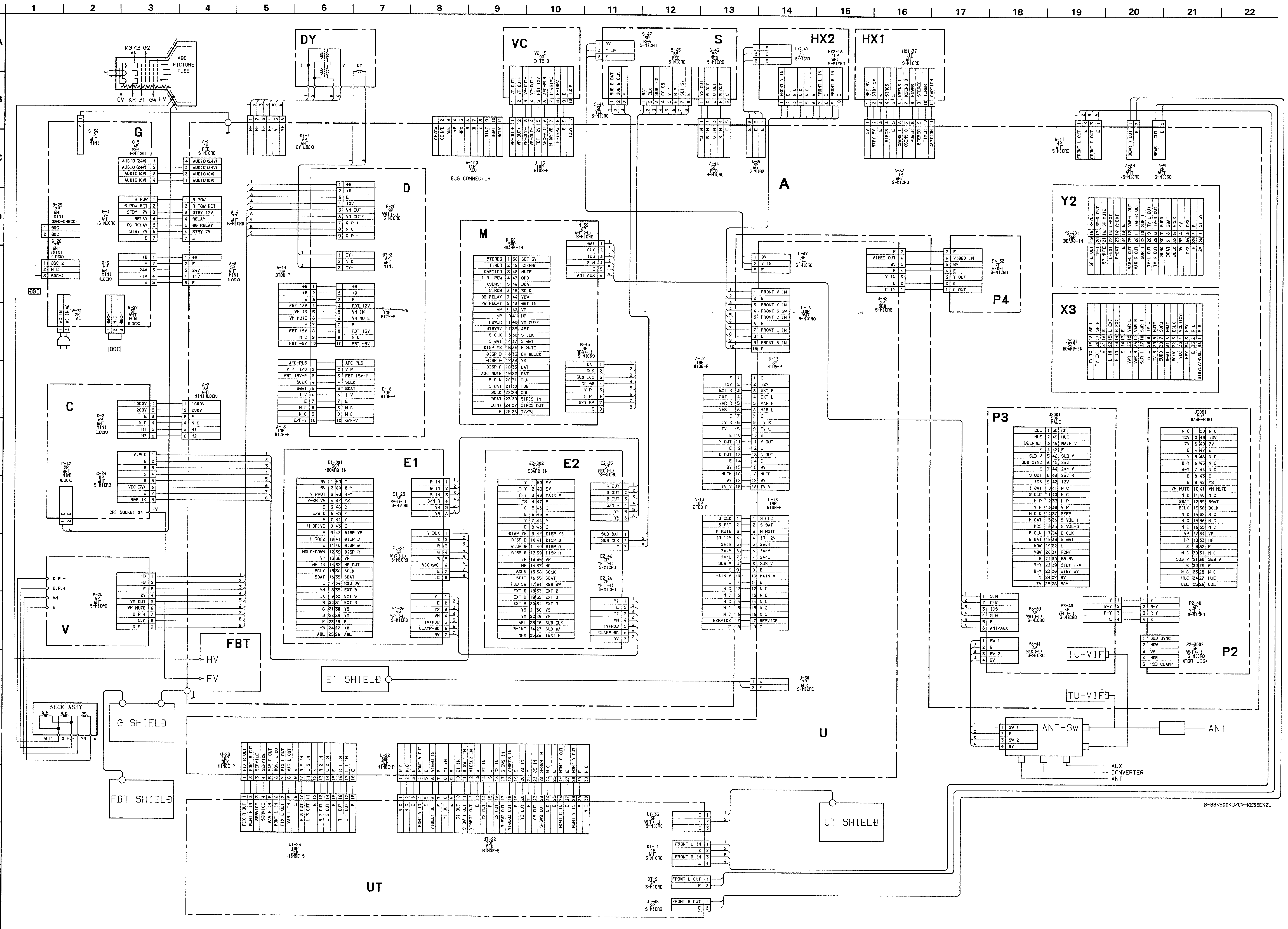

③
SIRCS
IC001 MAIN CONTROL
DET IN
H SYNC Q001
H SYNCI
TV/PJ
TVPJNI
B INT
BINTNI
COL
ICOLO
HUE
IHUEO
AGMUNO
AGC MUTE
SWVLLO
RMCN1
LAT
PLATO
DISP R
YM
YMO
DISP G
CH BLOCK
BLOCKO
DISP B
DISP YS
AFT
AFTI
VM MUTE
VMUTEO
PW RELAY
RLYO
VDW
IVPNI
DG RELAY
DEGANOI
KSENS1
KSENII
OPO
OPTII
I R POW
HPIRO
CAPTION
LCCHNO
KSENSO
KSENOI
TIMER
LTIMNO
STEREO
LSTENO
MUTE
MUTE 1 Q014
MUTENO
S CLK
S SLK
B CLK
BCLKO
B DAT
BDATO
S DAT
DAT SW Q011
M MUTE
MUTE 2 Q012
MMUTEO
IC002 RESET
5V
RESET
POWER
PWRNI
CLK
DAT
VP
HP
SCLKNO
CLDSNI
H
V
SUB ISC
ICSNO
SDATI
ANTAUO
M-45
SUB ICS
M-39
ISC
SIN
ANT SW
CLK REV Q013
V PULSE Q009
H PULSE Q010
Ⓛ
M (MAIN CONTROL μ-CON)
④
E2-002
Y(G)
B-Y(B)
R-Y(R)
RGB MATRIX Q2328 2329 2336
DC CLAMP Q2339(B) Q2340(R) Q2341(G)
Q2306 BUFFER(G)
Q2307 BUFFER(B)
Q2308 BUFFER(R)
EXT R
EXT G
EXT B
DC CLAMP Q2320(R) Q2321(G) Q2322(B)
YS BUFFER Q2337
IC2306 RGB SW
YS
YS OR Q2301
YS BUFFER Q2303
YS OR Q2305
Q2311 R-OR
Q2313 G-OR
Q2315 B-OR
E2-25
IC2303 HALF BLT
YS SW (MUTE) Q2310 Q2312 Q2314
RGB BUFFER Q2317 Q2318 Q2319
SDA
SCK
INT
IC2301 CHARACTER GEN
OSD OSC
IC2307 BUS D/A
YSC
BS
YM BUFFER Q2324
YM OR Q2309
LVL
NRL
SV
IC2304(1/2) SHARPNESS CONTROL
WEIGHT
SLICE
SHP
VM OUT
FO
TV/RGB
E2-26
E2-46
E2 (SHARPNESS CONT CHARACTOR GENERATOR) (1/2)
Ⓗ
Ⓘ
S (SUB-CONTROL, MICON, CLOSED CAPTION DECORDER)
S-47
YIN
Y-BUFFER Q3441
IC3442 CC-DECORDER FRONT
INPUT
21H
DATA
O/E
IC3443 CC CONTROL DECORDER
X3441
T/C
CH1/CH2
CAP ON/OFF
RESET
IC3444 RESET
+5V
IC3401 RESET
SET +5V
IC3402 SUB MICON
CAT/TETXT
CC ON/OFF
X3401
X IN
X OUT
B DAT
B CLK
S DAT
S CLK
CS
V P
H P
SUB B DAT
SUB B CLK
S-46
S-45
BUFFER Q3444
S-43
YS OUT
R OUT
G OUT
B OUT
BL


E1-25
IC302(1/2) Y/C JUNGLE
YS
YM
B IN
G IN
R IN
FILTER
INV Q326
V PROT
V DRIVE
E/W DRIVE
EW D
HD
H DRIVE
YS +YM
H-TRPZ
BIN
DISP B
DISP G
HOLD DOWN
DISP R
VP 1/0
V P-INV Q327
V P
H P IN
H P
H P OUT
CLK
SCLK
SDA
SDAT
ABL
E1-26
VM
VM Q340 342
IC301(1/2) D/A CONV
DAT
H BUFFER Q328
TV RGB
TV-SW Q334
TV
E1 (Y/C JUNGLE) (1/2)
⑤
G-31
AC IN
AC IN(W)
G-27
G-28
DGC
T601
T602
D601 AC REG
F602
THP601
RY602
RY601
RELAY DRIVE Q654
PROTECT Q656
RELAY DRIVE Q655
CONV Q601
CONV Q602
T603
CONV Q603
CONV Q604
T604
T605
CONT Q653
CONT DRIVE Q652
IC654 OCP
CONT Q605
IC651 POWER MD
RY
OCP 1
OCP IN
+B
G-3
24V
11V
G-5
AUDIO 24V
AUDIO 0V
Ⓒ
G-4
RY POW RET
DG RELAY
RELAY POWER
STBY 7V
RELAY
STBY 17V
G (POWER SUPPLY DEGAUSSING CIRCUIT)
⑦
MPX
B CLK
B DAT
SUR 0
SUR 1
VAR-R OUT
VAR-L OUT
SP MUTE
TP-1
SP-R OUT
SP-L OUT
R-VOL
R-EXT
L-EXT
TV-R OUT
TV-L OUT
IC406 MTS DECODE
MPX IN
IC404 ROM
SDA
SCL
IC408 D/A CONT
BUFFER Q410
BUFFER Q409
IC403 AMPLIFIER
15dB
IC407 VOL-CONT
R OUT
TREBLE
L OUT
BASS
BAL
VOL
TRE
BALANCE
R VOL
L IN
R IN
L LSOUT
R LSOUT
DBX IN
BUFFER Q405
BUFFER Q404
ATT
-9dB
EXT IN R
EXT IN L
TV OUT R
TV OUT L
Y2 (MTS DECORDER NVM AUDIO CONT)

6-4.BLOCK DIAGRAM (4)

TU101
SERVICE
AGC MUTE Q202
VIDEO BUFFER Q201
U (AV SW COMB FILTER) (1/2)
TV V BUFFER Q1023
IC1002 (1/2) AV SW
V-OUT Q1021
C-OUT Q1020
Y-OUT Q1017
MONI V OUT
MONI C OUT
MONI Y OUT
MONITOR OUT
J1806 (1/2)
VIDEO
Y/C
UT (AV I/O TERMINAL) (1/2)
J201
J202
P2 PACKAGE
P3 PACKAGE
H PACKAGE
E2 PACKAGE (2/2)
E2 PACKAGE (1/2)
E1 PACKAGE (1/2)
E1 PACKAGE (2/2)
IC502 H V PROTECT
PROTECT 1 2 Q509 510
Y-BUFFER Q312
Y-FILTER Q305
Y-γ Q311 314
Y-AMP Q304
Y-BUFFER Q303
C-BUFFER Q321 310 344
FILTER Q301
Y-AMP Q302
SYNC-SEP Q333 335
INV Q317
IC2304 (1/2) SHR CONT
Y-BUFFER Q2327
Y BUFFER Q306
IC302 (1/2) Y/S JUNGLE
R BUFFER Q327
G BUFFER Q324
B BUFFER Q325
BUFFER Q711
SW 1 2 Q710 712
R G B IK DET Q707 716 715 706 703 714
VIDEO AMP Q709 705 702
R G B OUT Q708 704 701
RGB OUT
V901 PICTURE TUBE
RV701 SCREEN
RV702 H STAT
TO FV
C (R G B OUT)
BUFFER Q316 315
V SW Q307
IK-DET Q309
V BLK-INV Q323
V-BOW Q330
V-ANG Q329
IC301 (1/2) D/A-CONV
IC303 AFC
H PULSE Q505
IC503 (1/2) DF DRIVE
DF DRIVE Q508 Q511
DF OUT Q503
T504 DFT
IC501 PIN CORR
PIN DRV 1 2 Q513 502
PIN OUT Q506
IC503 (1/2) PIN CORR
I SOURCE Q515
PIN MUTE Q516
C SPLY Q504
INVERT Q512
H DRIVE Q507
T503
H OUT Q501
T502 HL
T501
15V RECT Q514
-5V RECT Q516
200V RECT Q515
V PROT Q501
BUFFER Q1502
IC1501 V OUT
DY (1/2)
IC1202 Y/C INPUT
Y BUFFER Q1218
VIDEO BUFFER Q1209
C BUFFER Q1211
KILLER Q1215
IC1201 MICRO COMPUTER
VIDEO BUFFER Q1202,1214
Y BUFFER Q1207,1208,1212
Y OUTPUT Q1215
C BUFFER Q1203-1205
C OUTPUT Q1206
P4 (DIGITAL COMB FILTER)
IC504 12V REG
IC201 9V REG
IC204 5V REG
IC206 12V REG
IC205 STBY 5V REG
Y2 PACKAGE
X3 PACKAGE
F AMP MUTE Q1407
F L MUTE Q1401
F R MUTE Q1408
R AMP MUTE Q1405
R L MUTE Q1404
R R MUTE Q1403
IC1401 FRONT AMP
IC1402 REAR AMP
REAR L OUT
REAR R OUT
FRONT L OUT
FRONT R OUT
VP OUT 1 Q1801
VP OUT 2 Q1802
T1801 VPOT
VP DRIVE Q1803
IC1801 (1/2) H-OSC
IC1801 (2/2) V P-PHA
IC802 VP DRIVE
VC (V PIN CORR)
A
TUNER-VIF/SIF
HIGHT VOLTAGE CIRCUIT
H/V DEFLECTION
X-RAYS PRO
H PIN CORR
AUDIO POWER AMP
A
B
C
D
E
F
G
H
I
J
M
①
②
③
④
⑤
⑥
⑦

6-5.FRAME SHEMATIC DIAGRAM


1
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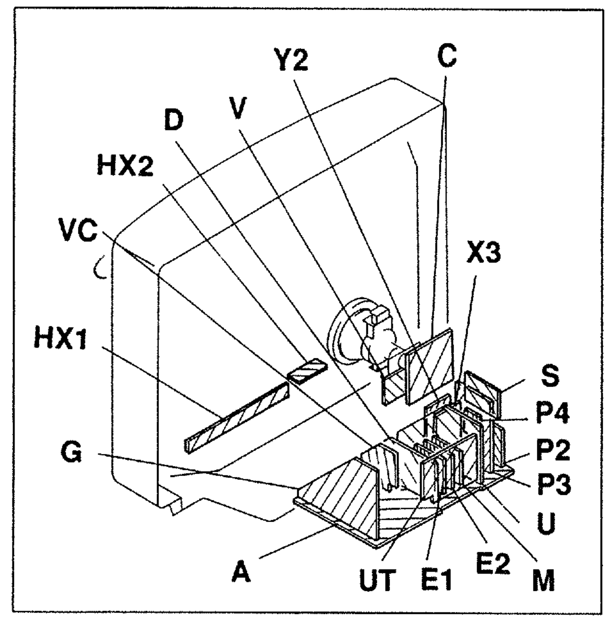
15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
V901 PICTURE TUBE
KG KB G2
CV KR G1 G4 HV
DY
VC
S
HX2
HX1
G
D
M
A
C
E1
E2
P4
Y2
X3
P3
P2
V
FBT
HV
FV
E1 SHIELD
G SHIELD
FBT SHIELD
UT SHIELD
NECK ASSY
U
UT
TU-VIF
ANT-SW
ANT
AUX
CONVERTER
ANT
BUS CONNECTOR
CRT SOCKET G4
B-SS4500<U/C>-KESSENZU

6-6.CIRCUIT BOARDS LOCATION


Y2
C
D
V
HX2
VC
X3
HX1
S
P4
P2
P3
G
U
A
UT
E1
E2
M

6-7.SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted pF µµF 50WV or less are not indicated except for electrolytic and tantalums
- All electrolytics are in 50V unless otherwise specified
- All resistors are in ohms
  KΩ = 1000Ω, MΩ = 1000KΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows

Pitch 5 mm
Rating electrical power 1/4W

- Chips resistors are 1/10W
- ▭ nonflammable resistor
- △ internal component
- ▭ panel designation, and adjustment for repair
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted
- ⊥ earth-ground
- ⏚ earth-chassis
- ⏚ earth-chassis
- The components identified by ⧓ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation
  Should replacement be required, replace only with the value originally used
- When replacing components identified by ◪ mark the necessary adjustments indicated If results do not meet the specified value, change the component identified by ⧓ and repeat the adjustment until the specified value is achieved
  (Refer to R565 and R566 on page 51~53 in the Service Manual)
- When replacing the part in below table be sure to parform the related adjustment

Part replaced (◪)	Adjustment (⧓)
IC502, Q509, Q510, R565, R567, R568, R569 ····· ·· · A BOARD	R565 (HOLD-DOWN)
IC502, Q509, Q510, D502, C531, R554, R566, R567, R568, R569, R1506, T501 ··· A BOARD	R566 (HOLD-DOWN)
IC651, R651 · G BOARD	

- Readings are taken with a color bar signal input
- Readings are taken with a 10 MΩ digital multimeter
- Voltage are dc with respect to ground unless otherwise noted
- Voltage variations may be noted due to normal production tolerance
- All voltages are in V
- ▬▬ B+ bus
- ▬ ▬ B- bus
- signal path

Reference information

RESISTOR	. RN	METAL FILM
	· RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	FUSE	NONFLAMMABLE FUSIBLE
	. RW	NONFLAMMABLEWIREWOUND
	: RS	NONFLAMMABLEMETALOXIDE
	RB	NONFLAMMABLE CEMENT
	· ※	ADJUSTMENT RESISTOR
COIL	LF-8L	MICRO INDUCTOR
CAPACITOR	TA	TANTALUM
	. PS	STYROL
	. PP	POLYPROPYLENE
	· PT	MYLAR
	MPS	METALIZED POLYESTER
	. MPP	METALIZED POLYPROPYLENE
	ALB	BIPOLAR
	· ALT	HIGH TEMPERATURE
	. ALR	HIGH RIPPLE

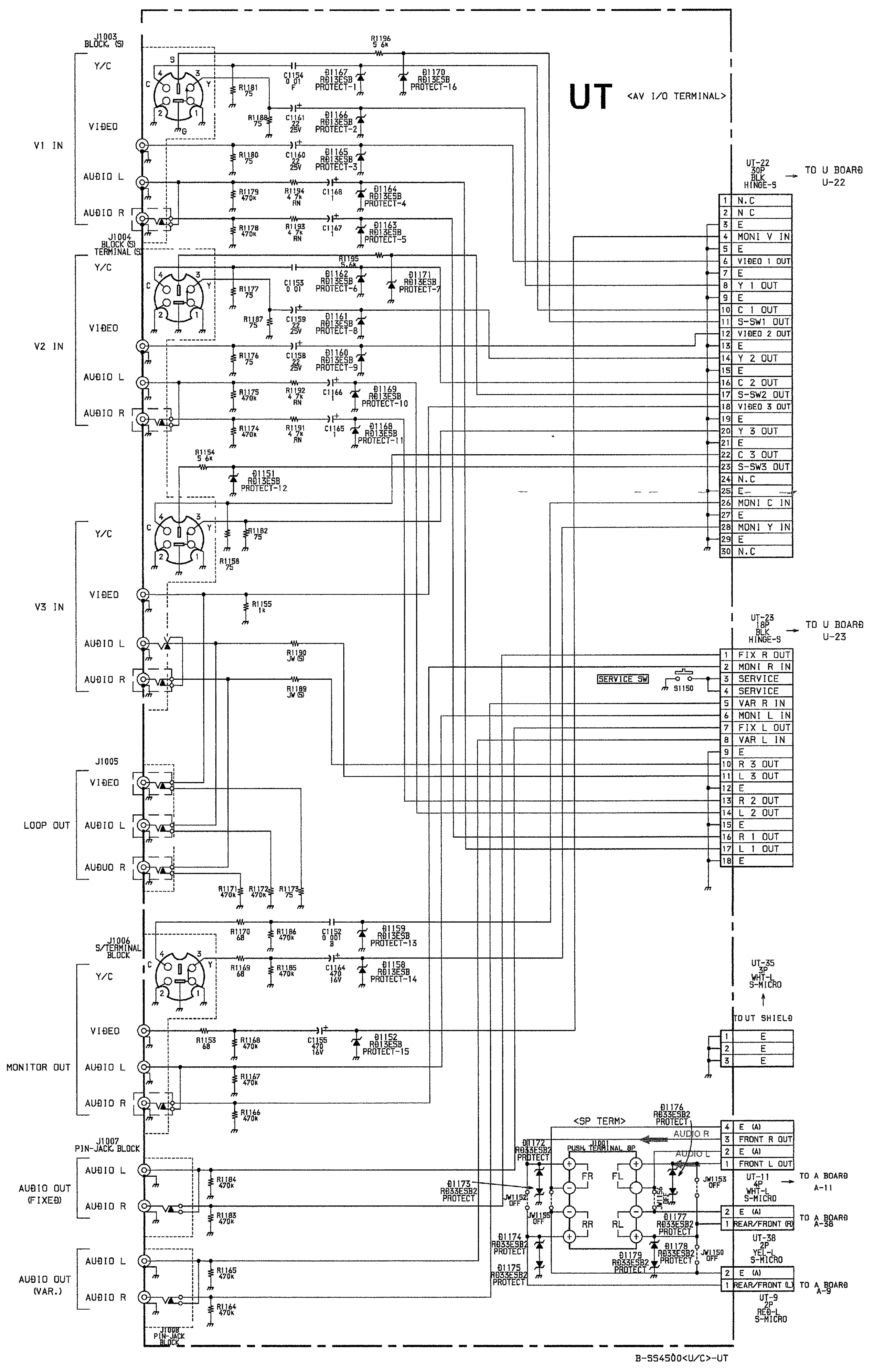
Note The symbol -▮⊞- display is on the component side

The components identified by shading and mark ⚠ are critical for safety Replace only with part number specified

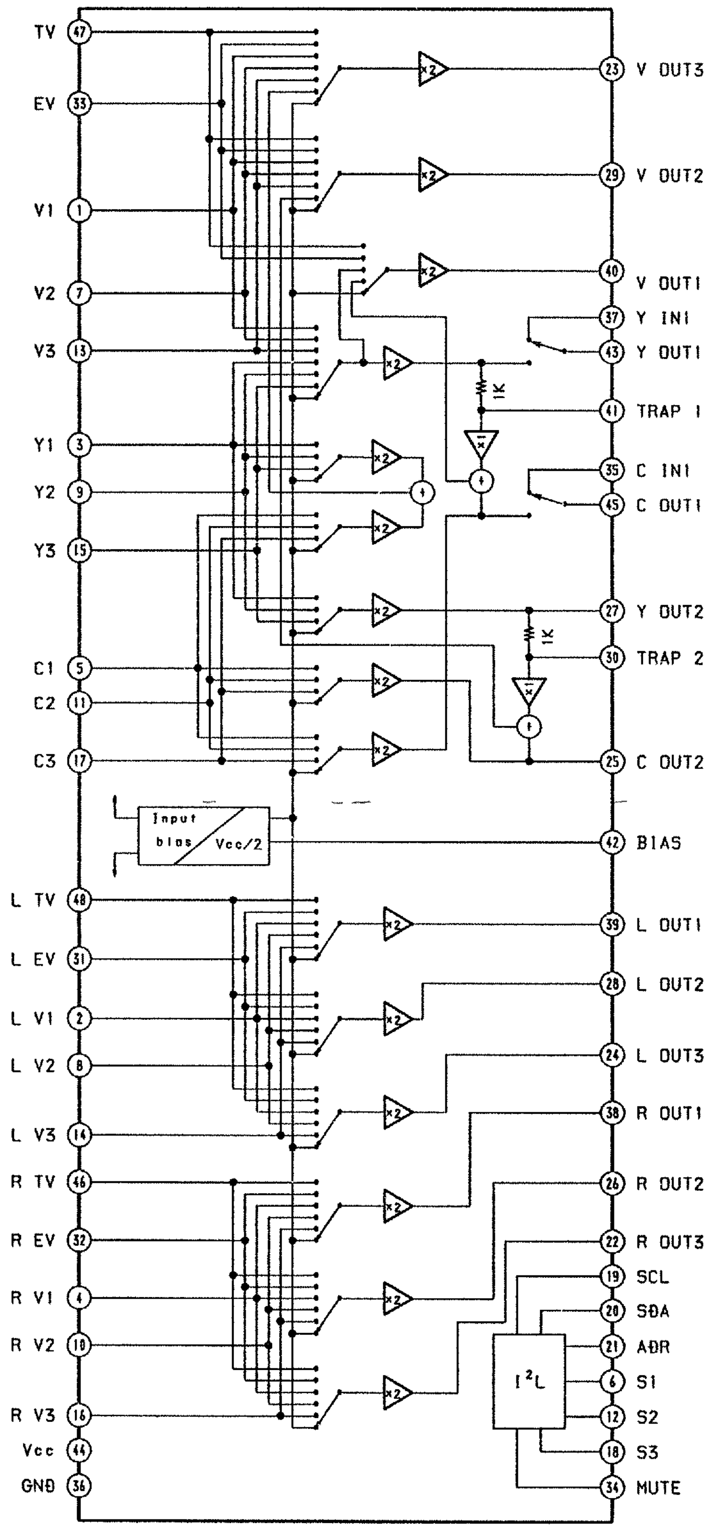
The symbol -▮⊞- indicate fast operating fuse Replace only with fuse of same rating as marked

Note Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité Ne les remplacer que par une pièce portant le numéro spécifié

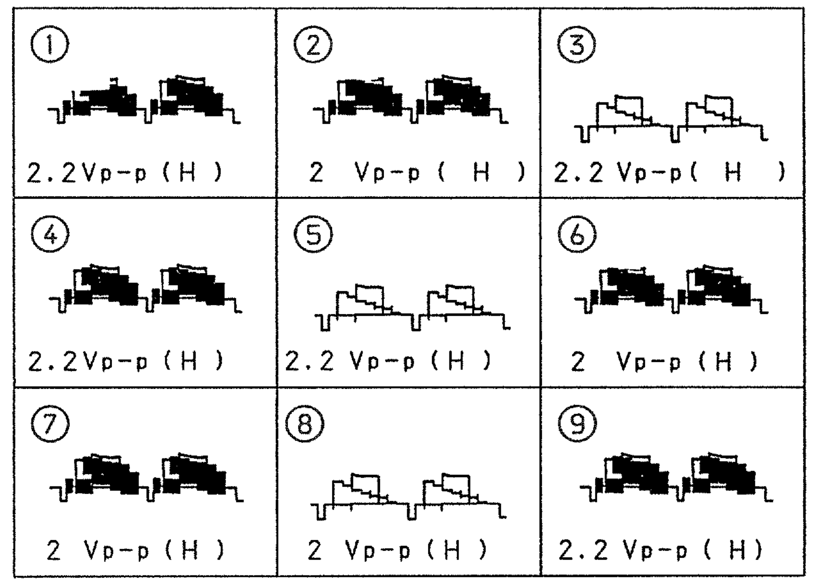
Le symbole -▮⊞- indique une fusible a action rapide Doit etre remplacee par une fusible de meme yaleur, comme maque

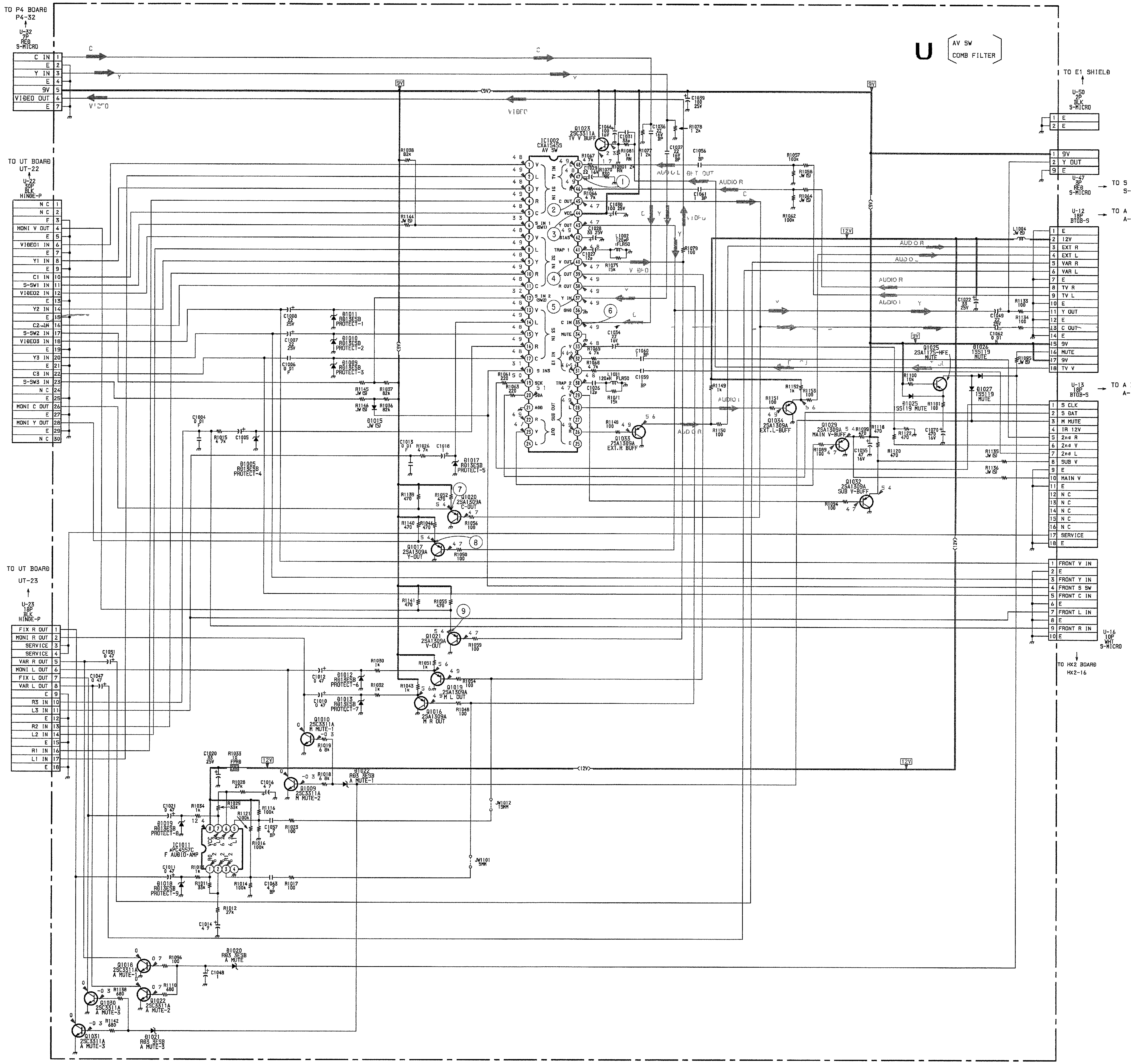

UT <AV I/O TERMINAL>
V1 IN
V2 IN
V3 IN
LOOP OUT
MONITOR OUT
AUDIO OUT (FIXED)
AUDIO OUT (VAR.)
Y/C
VIDEO
AUDIO L
AUDIO R
SERVICE SW
<SP TERM>
TO U BOARD U-22
TO U BOARD U-23
TO A BOARD A-11
TO A BOARD A-38
TO A BOARD A-9
OUT SHIELD
B-SS4500<U/C>-UT

• U BOARD IC1002 CXA1545S


TV
EV
V1
V2
V3
Y1
Y2
Y3
C1
C2
C3
L TV
L EV
L V1
L V2
L V3
R TV
R EV
R V1
R V2
R V3
Vcc
GND
V OUT3
V OUT2
V OUT1
Y IN1
Y OUT1
TRAP 1
C IN1
C OUT1
Y OUT2
TRAP 2
C OUT2
BIAS
L OUT1
L OUT2
L OUT3
R OUT1
R OUT2
R OUT3
SCL
SDA
ADR
S1
S2
S3
MUTE
Input bias Vcc/2
I²L

• U BOARD WAVEFORMS


①
2.2Vp-p (H)
②
2 Vp-p (H)
③
2.2 Vp-p(H)
④
2.2Vp-p (H)
⑤
2.2 Vp-p (H)
⑥
2 Vp-p (H)
⑦
2 Vp-p (H)
⑧
2 Vp-p (H)
⑨
2.2 Vp-p (H)

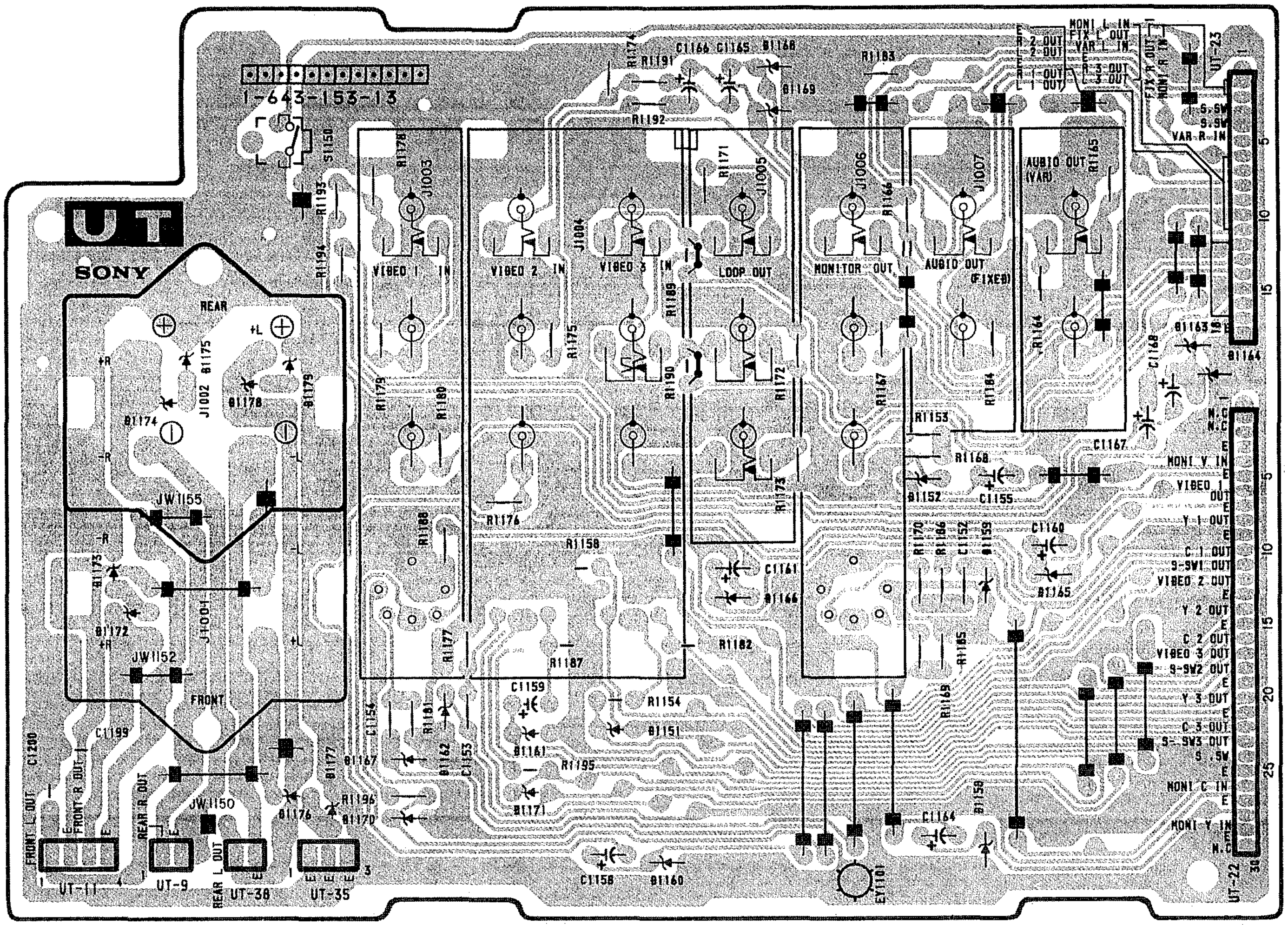

U (AV SW COMB FILTER)
TO P4 BOARD P4-32
TO UT BOARD UT-22
TO UT BOARD UT-23
TO E1 SHIELD
TO S BOARD S-47
TO A BOARD A-12
TO A BOARD A-13
TO HX2 BOARD HX2-16
IC1002 CXA1545S AV SW
IC1011 AUDIO AMP
VIDEO
AUDIO L
AUDIO R

Schematic diagrams

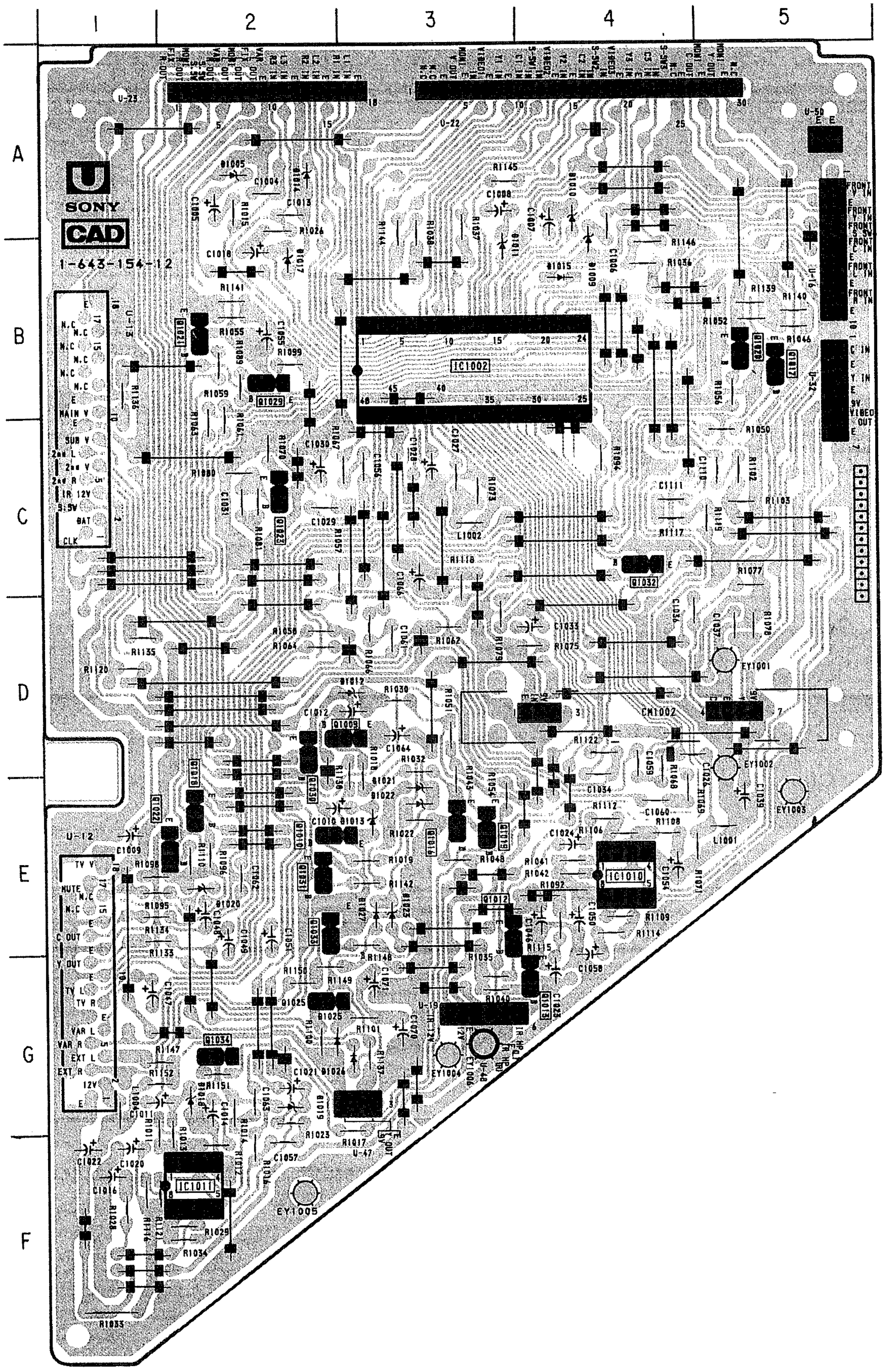
UT V boards ➡

UT [AV I/O TERMINAL] **U** [AV SW, COMB FILTER]

– UT BOARD –


1-643-153-13
UT
SONY
S1150
REAR
FRONT
J1002
J1001
J1003
J1004
J1005
J1006
J1007
VIDEO 1 IN
VIDEO 2 IN
VIDEO 3 IN
LOOP OUT
MONITOR OUT
AUDIO OUT (FIXED)
AUDIO OUT (VAR)
JW1155
JW1152
JW1150
FRONT L OUT
FRONT R OUT
REAR R OUT
REAR L OUT
UT-11
UT-9
UT-38
UT-35
UT-23
UT-22
EY1101
MONI L IN
FIX L OUT
VAR L IN
R 2 OUT
L 2 OUT
R 3 OUT
L 3 OUT
R 1 OUT
L 1 OUT
FIX R OUT
MONI R IN
S-SW
VAR R IN
N.C
MONI Y IN
VIDEO 1
Y 1 OUT
C 1 OUT
S-SW1 OUT
VIDEO 2 OUT
Y 2 OUT
C 2 OUT
VIDEO 3 OUT
S-SW2 OUT
Y 3 OUT
C 3 OUT
S-SW3 OUT
MONI C IN
C1153
C1154
C1155
C1158
C1159
C1160
C1161
C1164
C1165
C1166
C1167
C1168
C1199
C1200
R1153
R1154
R1158
R1164
R1165
R1166
R1167
R1168
R1169
R1170
R1171
R1172
R1173
R1174
R1175
R1176
R1177
R1178
R1179
R1180
R1181
R1182
R1183
R1184
R1185
R1186
R1187
R1188
R1189
R1190
R1191
R1192
R1193
R1194
R1195
R1196

– U BOARD –

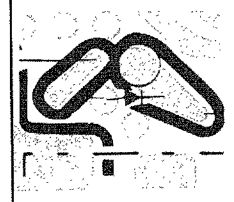

1
2
3
4
5
A
B
C
D
E
F
G
U
SONY
CAD
1-643-154-12
IC1002
IC1010
IC1011
CN1002
EY1001
EY1002
EY1003
EY1004
EY1005
EY1006
L1001
L1002
U-12
U-13
U-16
U-19
U-22
U-23
U-32
U-47
U-48
U-50
FRONT V IN
FRONT L IN
FRONT R IN
FRONT C IN
FRONT Y IN
9V VIDEO OUT
TV V
MUTE
C OUT
Y OUT
TV L
TV R
VAR L
VAR R
EXT L
EXT R
12V
MAIN V
SUB V
IR 12V
9.5V
BAT
CLK

IC	
IC1002	B – 3
IC1010	E – 4
IC1011	F – 2
TRANSISTOR	
Q1009	D – 2
Q1010	E – 2
Q1012	G – 3
Q1013	G – 4
Q1016	E – 3
Q1017	B – 5
Q1018	E – 2
Q1019	E – 3
Q1020	B – 5
Q1021	B – 2
Q1022	E – 1
Q1023	C – 2
Q1025	G – 2
Q1029	B – 2
Q1030	D – 2
Q1031	E – 2
Q1032	C – 4
Q1033	E – 2
Q1034	G – 2
DIODE	
D1005	A – 2
D1009	B – 4
D1010	A – 4
D1011	B – 3
D1012	D – 3
D1013	E – 3
D1014	A – 2
D1015	B – 4
D1017	B – 2
D1018	G – 2
D1019	G – 2
D1020	E – 2
D1021	E – 3
D1022	E – 3
D1023	E – 3
D1025	G – 2
D1026	G – 2
D1027	E – 3

IC	
IC201	D – 5
IC202	D – 1
IC204	D – 6
IC205	D – 1
IC206	B – 7
IC501	A – 10
IC502	C – 12
IC503	C – 11
IC504	B – 6
IC1401	C – 5
IC1501	B – 9

TRANSISTOR	
Q201	C – 4
Q202	G – 2
Q501	D – 10
Q502	A – 11
Q503	G – 7
Q504	A – 11
Q505	B – 11
Q506	D – 12
Q507	C – 10
Q508	C – 11
Q509	B – 12
Q510	B – 12
Q511	C – 11
Q512	B – 10
Q513	A – 11
Q515	C – 11
Q516	B – 11
Q1401	B – 4
Q1407	B – 5
Q1408	B – 4
Q1501	B – 8
Q1502	A – 9

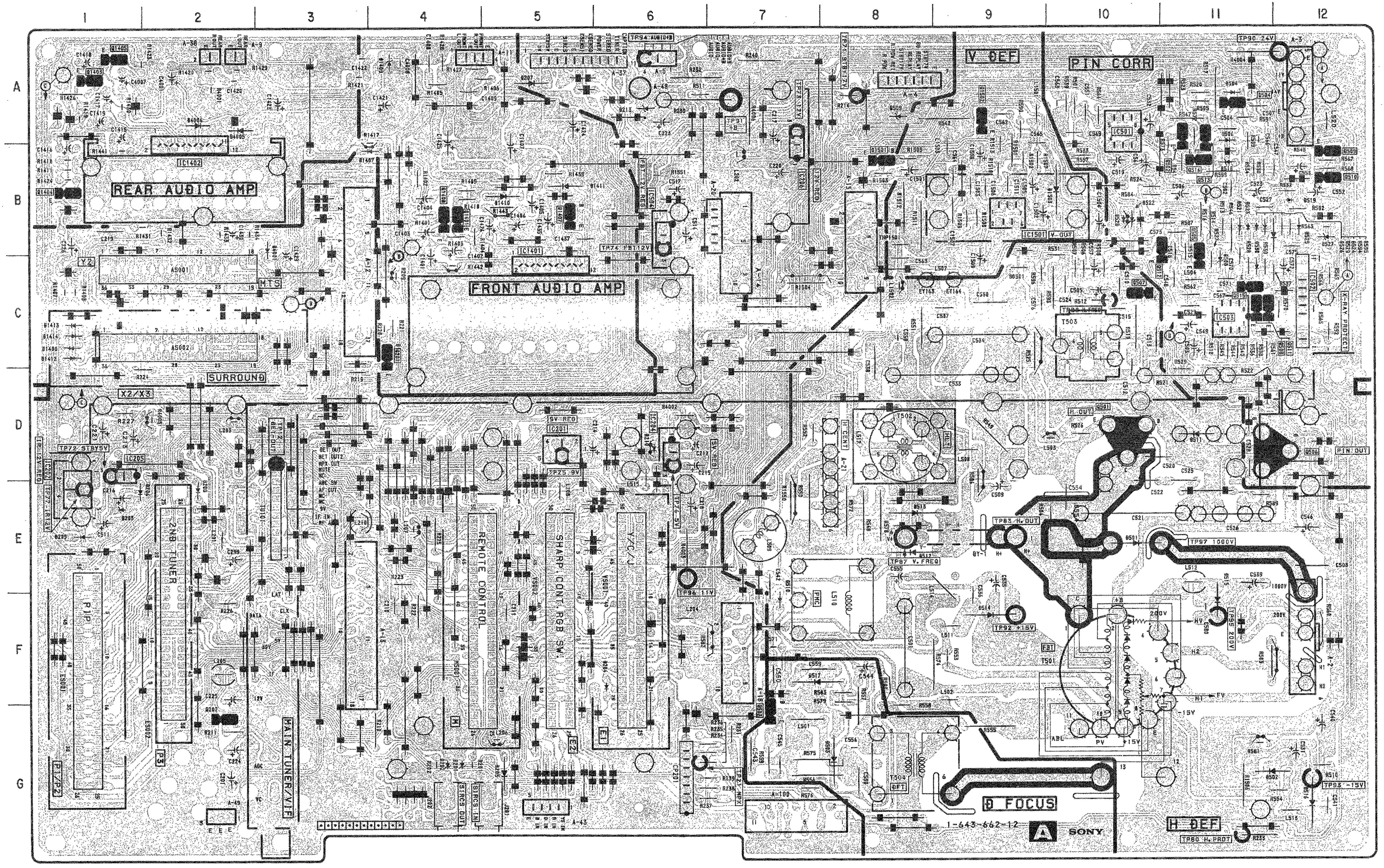
DIODE	
D205	G – 5
D206	E – 1
D207	A – 5
D208	E – 2
D209	E – 1
D213	A – 6
D501	E – 10
D502	G – 11
D503	G – 8
D504	A – 11
D506	A – 11
D508	C – 11
D509	A – 8
D510	F – 7
D511	D – 11
D512	E – 8
D513	E – 8
D514	F – 9
D515	F – 11
D516	G – 12
D517	F – 7
D518	B – 11
D521	B – 11
D522	B – 10
D524	B – 11
D525	B – 12
D527	B – 12
D529	B – 11
D530	B – 11
D1407	B – 3
D1408	C – 1
D1409	A – 4
D1410	B – 5
D1411	B – 5
D1412	C – 1
D1413	C – 1
Q1414	C – 1
D1503	B – 10
D4001	B – 3



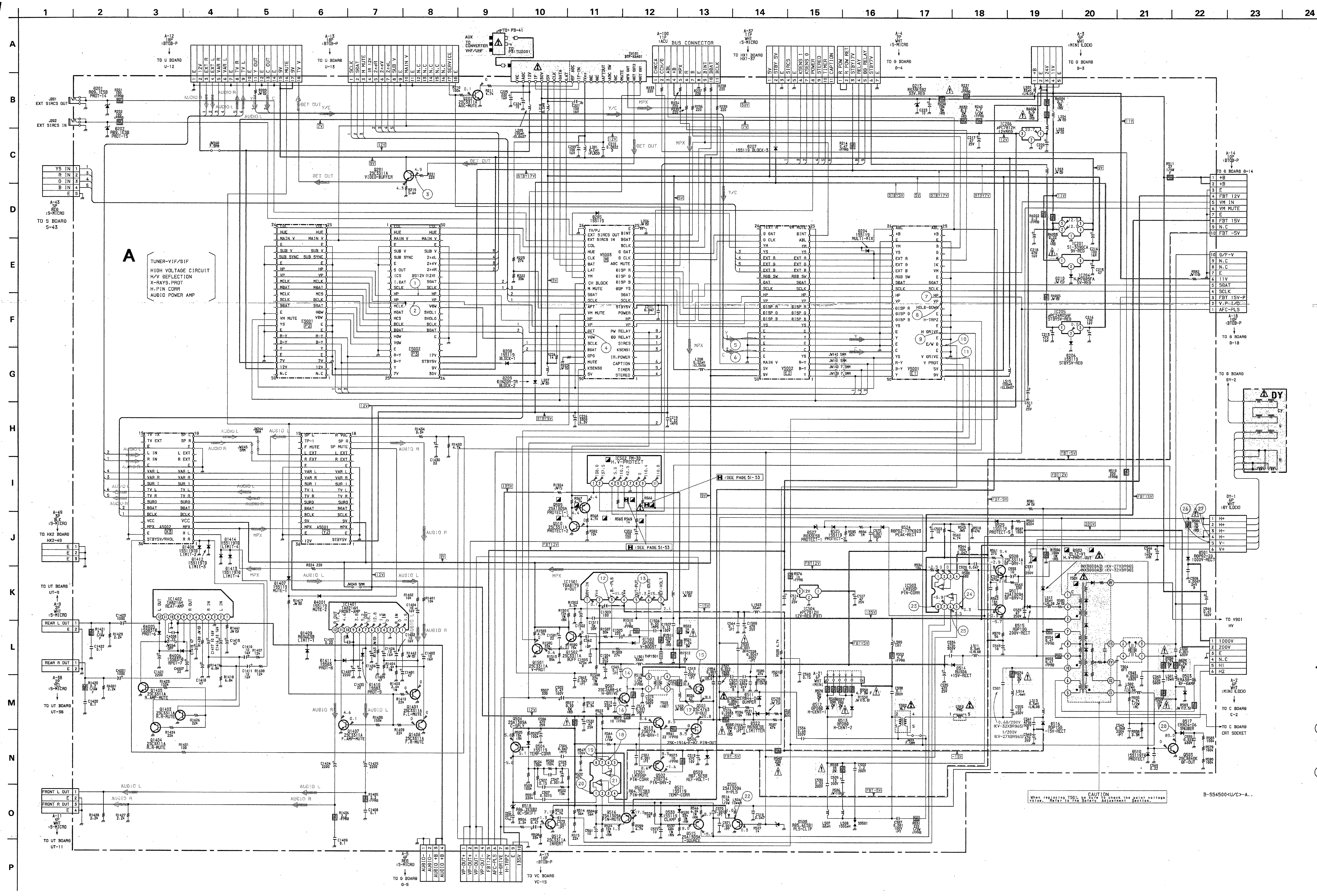
NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A TUNER – VIF/SIF, HIGH VOLTAGE CIRCUIT, H/V DEFLECTION, X – RAYS. PROT, H. PIN CORR, AUDIO POWER AMP.

– A BOARD –


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
REAR AUDIO AMP
FRONT AUDIO AMP
V DEF
PIN CORR
SURROUND
MTS
X2/X3
PIP
2ND TUNER
MAIN TUNER/VIF
REMOTE CONTROL
SHARP CONT, RGB SW
Y/C/J
H OUT
PIN OUT
FOCUS
H DEF
1-643-662-12
A
SONY

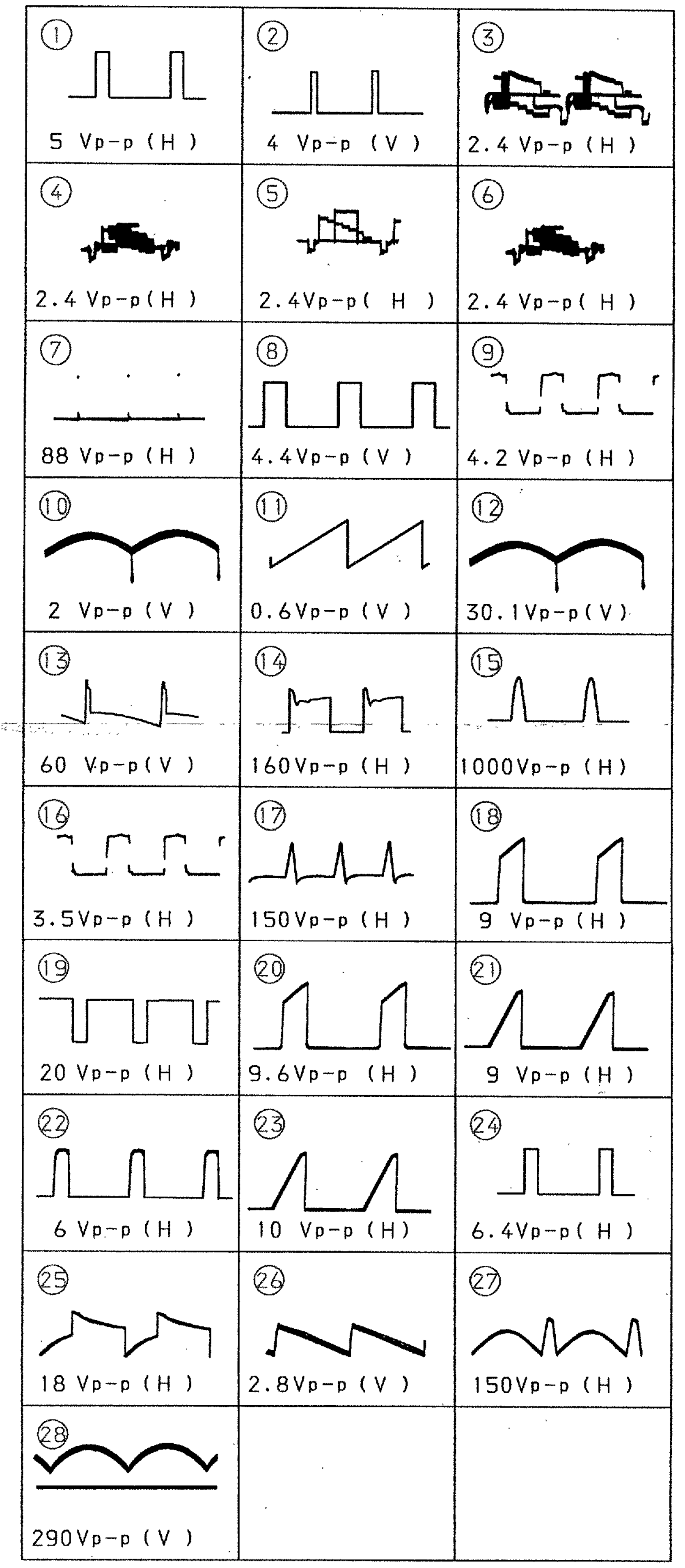
02


A
TUNER-VIF/SIF
HIGH VOLTAGE CIRCUIT
H/V DEFLECTION
X-RAYS.PROT
H.PIN CORR
AUDIO POWER AMP
EXT SIRCS OUT
EXT SIRCS IN
TO S BOARD S-43
TO HX2 BOARD HX2-49
TO UT BOARD UT-9
TO UT BOARD UT-38
TO UT BOARD UT-11
REAR L OUT
REAR R OUT
FRONT L OUT
FRONT R OUT
TO U BOARD U-12
TO U BOARD U-13
BUS CONNECTOR
TO HX1 BOARD HX1-37
TO G BOARD G-4
TO G BOARD G-3
TO G BOARD G-14
TO G BOARD G-18
TO G BOARD GY-2
TO G BOARD G-5
TO VC BOARD VC-15
TO C BOARD C-2
TO C BOARD CRT SOCKET
TO V901 HV
DY
IC1402 TA8216H REAR-AMP
IC1401 TA8216H FRONT-AMP
IC1501 TDA8179 V-OUT
IC1504 µPC7812H 12V-REG(FBT)
IC1503 LM358D PIN-CORR
IC201 SI-3050CA 9V-REG
IC204 NJM78M05FA 5V-REG
IC205 µPC24M05HF STBY5V-REG
:SEE PAGE 51-53
D510 1SS119TD PROTECT
C560 0.22
Q503 2SC3840K DF-OUT
R579 100k
R580 100k

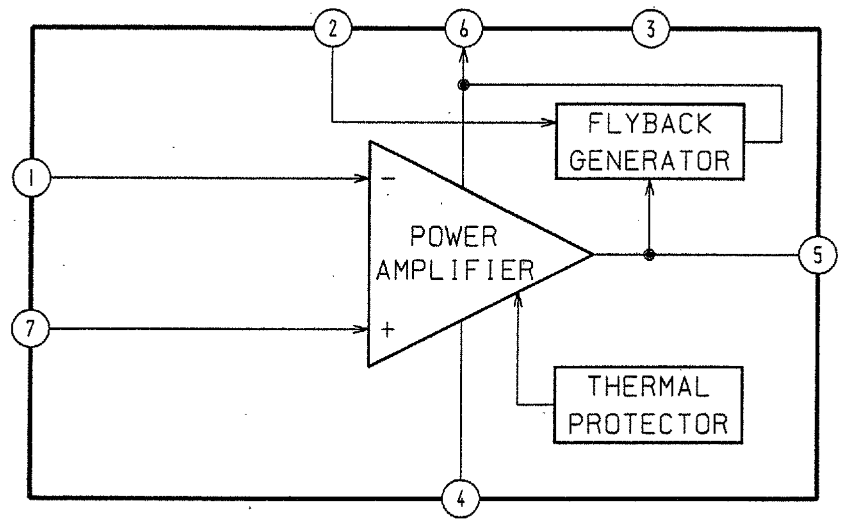
CAUTION
When replacing T501, be sure to check the point voltage value. Refer to the Safety Adjustment Section.

B-SS4500<U/C>-A..

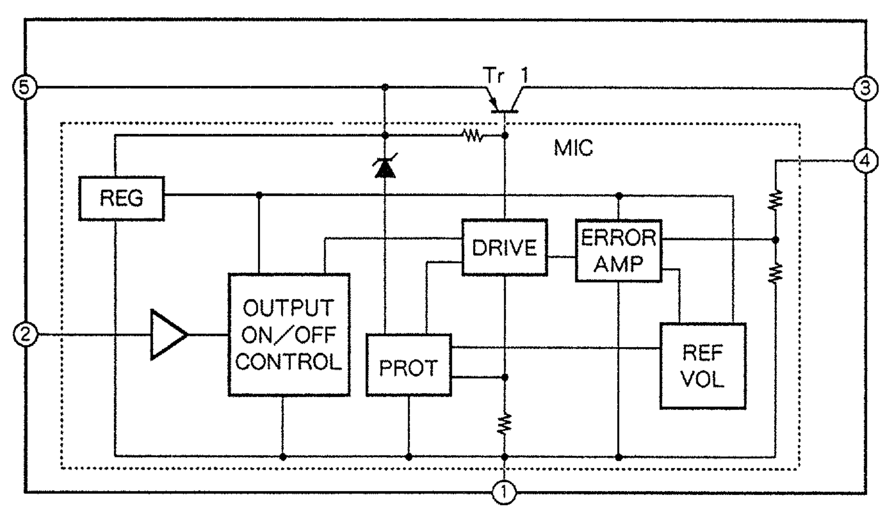
• A BOARD WAVEFORMS


①
5 Vp-p (H)
②
4 Vp-p (V)
③
2.4 Vp-p (H)
④
2.4 Vp-p (H)
⑤
2.4Vp-p (H)
⑥
2.4 Vp-p (H)
⑦
88 Vp-p (H)
⑧
4.4Vp-p (V)
⑨
4.2 Vp-p (H)
⑩
2 Vp-p (V)
⑪
0.6Vp-p (V)
⑫
30.1Vp-p (V)
⑬
60 Vp-p (V)
⑭
160Vp-p (H)
⑮
1000Vp-p (H)
⑯
3.5Vp-p (H)
⑰
150Vp-p (H)
⑱
9 Vp-p (H)
⑲
20 Vp-p (H)
⑳
9.6Vp-p (H)
㉑
9 Vp-p (H)
㉒
6 Vp-p (H)
㉓
10 Vp-p (H)
㉔
6.4Vp-p (H)
㉕
18 Vp-p (H)
㉖
2.8Vp-p (V)
㉗
150Vp-p (H)
㉘
290Vp-p (V)

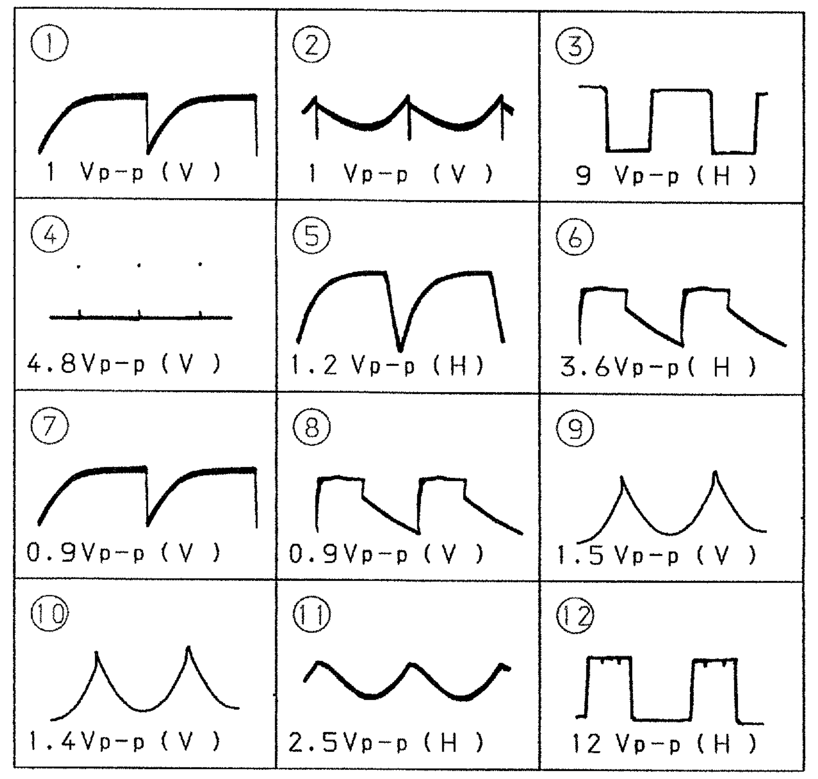
• A BOARD IC1501 TDA8179


1
2
3
4
5
6
7
FLYBACK GENERATOR
POWER AMPLIFIER
THERMAL PROTECTOR
-
+

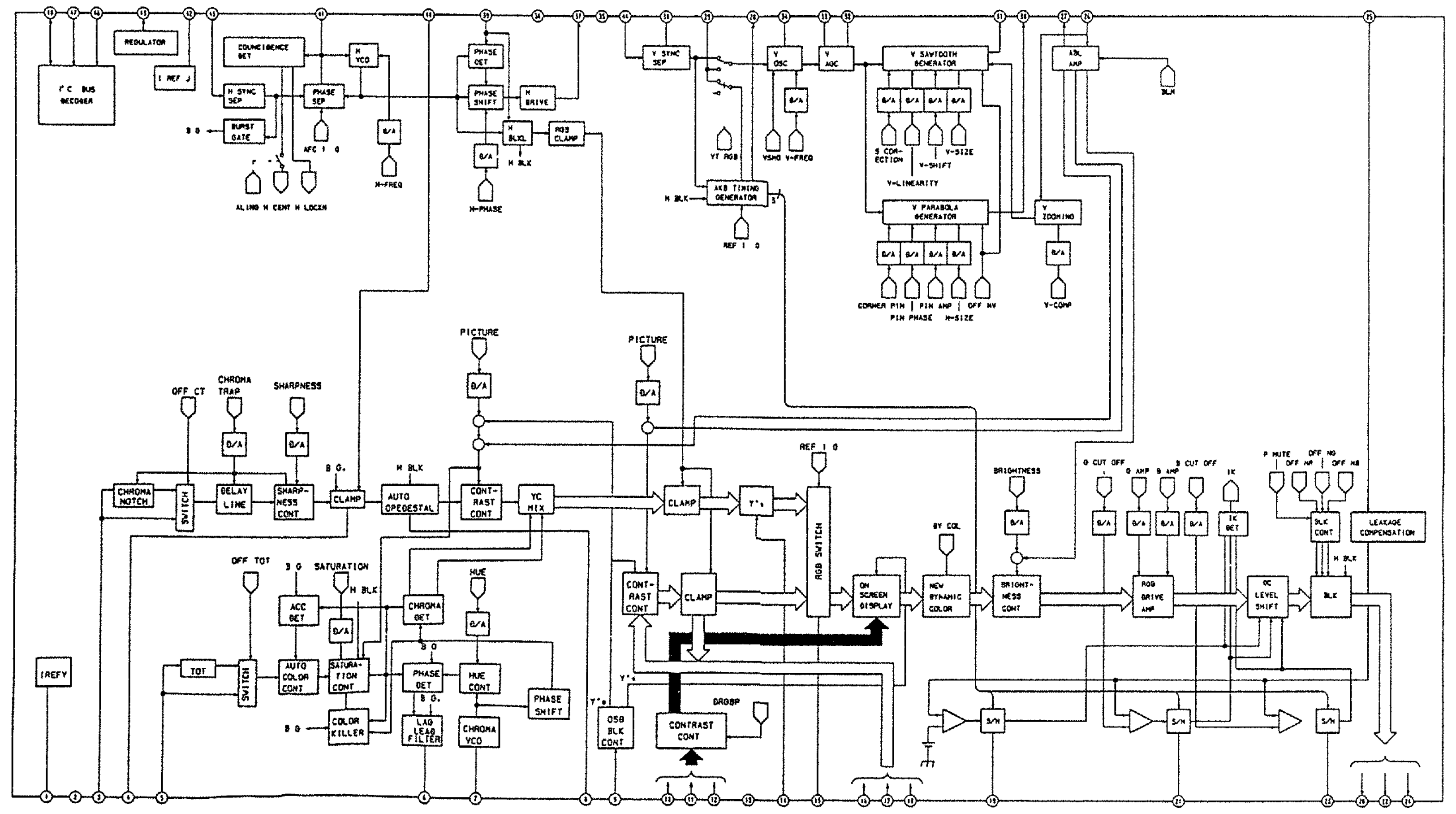
• D BOARD IC801 SI-3090CA


Tr 1
MIC
REG
DRIVE
ERROR AMP
OUTPUT ON/OFF CONTROL
PROT
REF VOL
①
②
③
④
⑤

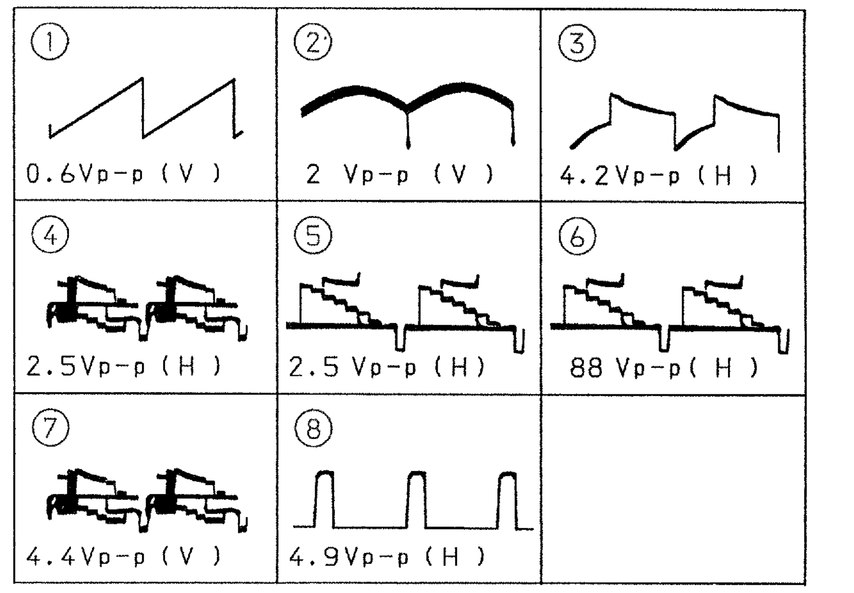
• D BOARD WAVEFORMS



• E1 BOARD IC302 CXA1465AS



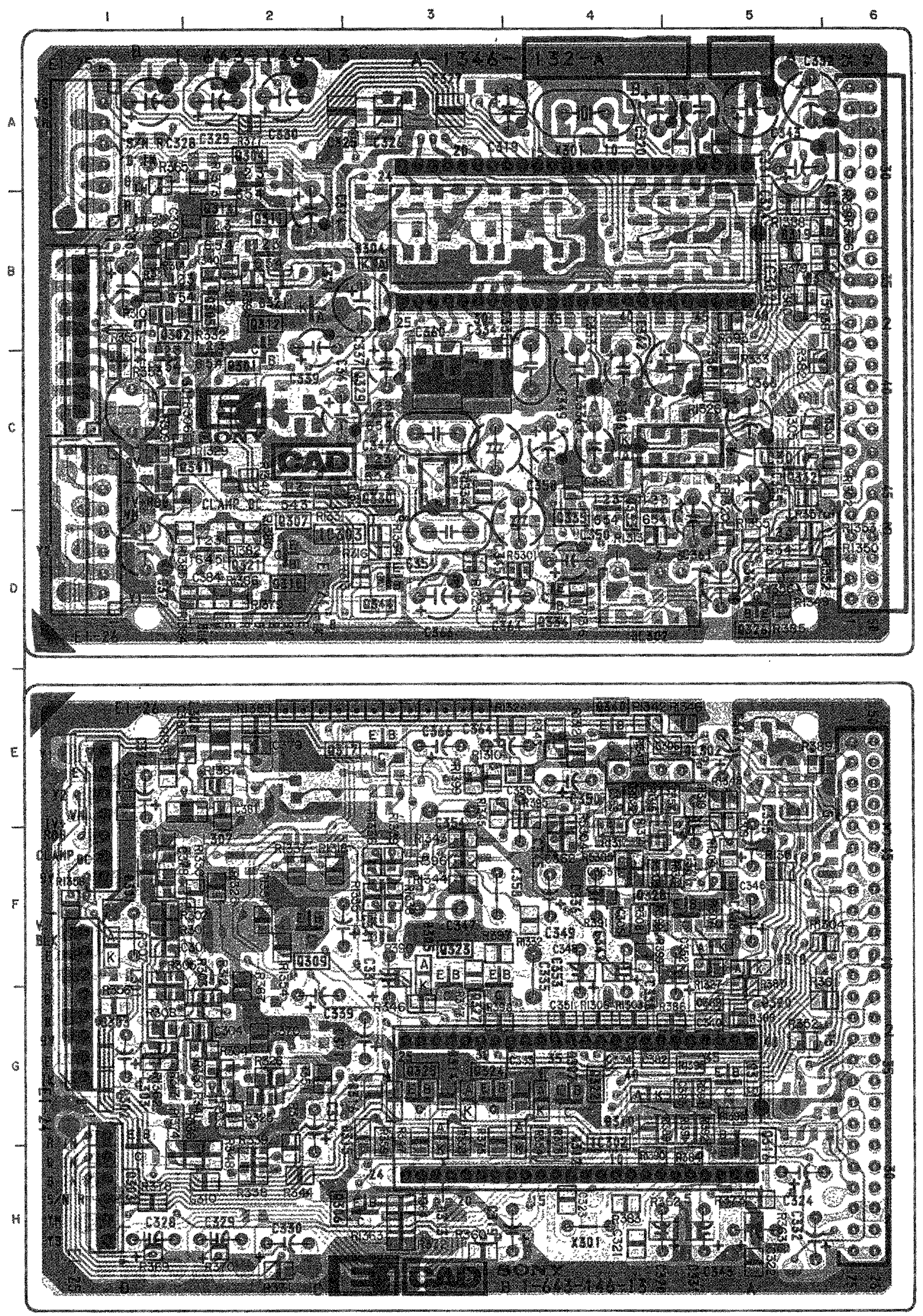
• E1 BOARD WAVEFORMS



IC801 SI3090CA
IC802 CXA-1526P DYNAMIC-CONV
IC302 CXA1465AS Y/C-JUNGLE
IC303 µPC4570G2-E1 AFC
IC301 CXA1315M D/A-CONV
DYNAMIC CONVERGENSE QUADRA-POLE
D
B-SS4496<U/C>-D..
E1
<Y/C JUNGLE>
B-SS4496<U/C>-E1.

E1 [Y/C JUNGLE] D [DYNAMIC CONVERGENSE QUADRA - POLE]

– E1 BOARD –



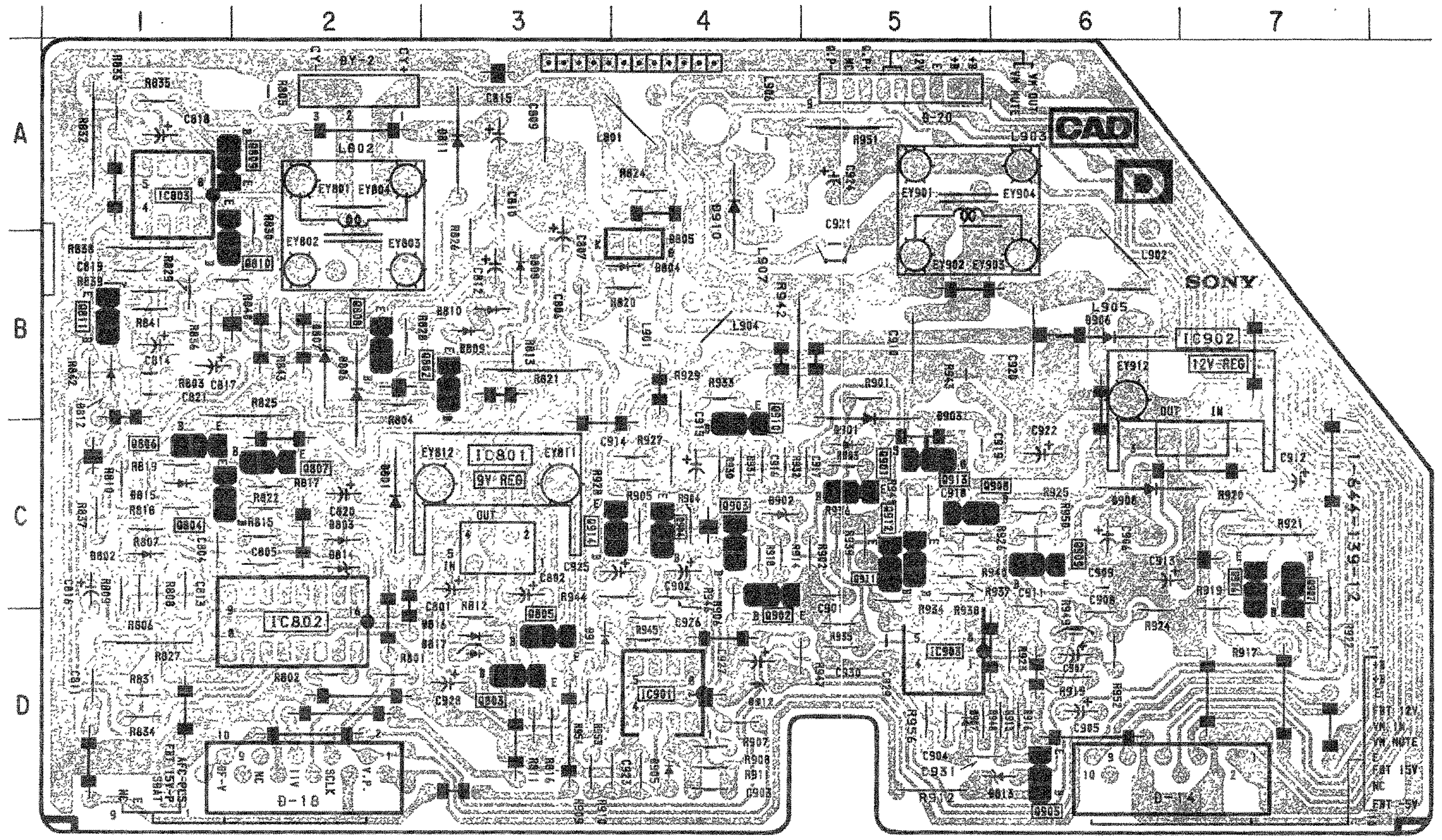
IC	
IC301	C – 5
IC302	B – 4, G – 4
IC303	C – 3

TRANSISTOR	
Q301	C – 2
Q302	C – 1
Q303	G – .1
Q304	A – 2
Q305	B – 1
Q306	H – 3
Q307	C – 2
Q309	F – 2
Q310	D – 2
Q311	B – 2
Q312	B – 2
Q314	B – 2
Q315	G – 5
Q316	G – 5
Q317	E – 3
Q321	D – 2
Q322	G – 4
Q323	F – 3
Q324	G – 3
Q325	G – 3
Q326	D – 5
Q327	G – 3
Q328	F – 5
Q329	C – 3
Q330	C – 3
Q333	D – 4
Q334	D – 4
Q335	D – 4
Q340	E – 4
Q342	D – 5
Q344	D – 3

DIODE	
D301	F – 1
D302	G – 1
D303	G – 1
D304	B – 3
D305	F – 3
D306	C – 4
D307	G – 4
D310	G – 4
D312	G – 4
D313	G – 3
D314	G – 3
D315	G – 2
D316	G – 3
D317	B – 5
D318	F – 5
D319	B – 5
D320	G – 5
D321	B – 2

Note :
- ▨ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.

– D BOARD –



IC	
IC801	C – 3
IC802	D – 2
IC803	A – 1
IC901	D – 4
IC903	D – 5

TRANSISTOR	
Q802	B – 3
Q803	D – 4
Q804	C – 1
Q805	D – 3
Q806	C – 1
Q807	C – 2
Q808	B – 2
Q809	A – 1
Q810	B – 2
Q811	B – 1
Q901	C – 5
Q902	C – 4
Q903	C – 4
Q904	C – 4
Q905	D – 6
Q906	C – 7
Q907	C – 7
Q908	C – 5
Q909	C – 6
Q910	B – 4
Q911	C – 5
Q912	C – 5
Q913	C – 5
Q914	C – 3

DIODE	
D801	C – 2
D802	C – 1
D803	C – 2
D804	B – 4
D805	B – 4
D806	B – 2
D807	B – 2
D808	B – 3
D809	B – 3
D810	B – 3
D811	A – 3
D812	B – 1
D813	D – 6
D814	C – 2
D815	C – 1
D816	D – 3
D901	C – 5
D902	C – 4
D903	B – 5
D906	B – 6
D907	D – 5
D908	C – 6
D911	D – 3

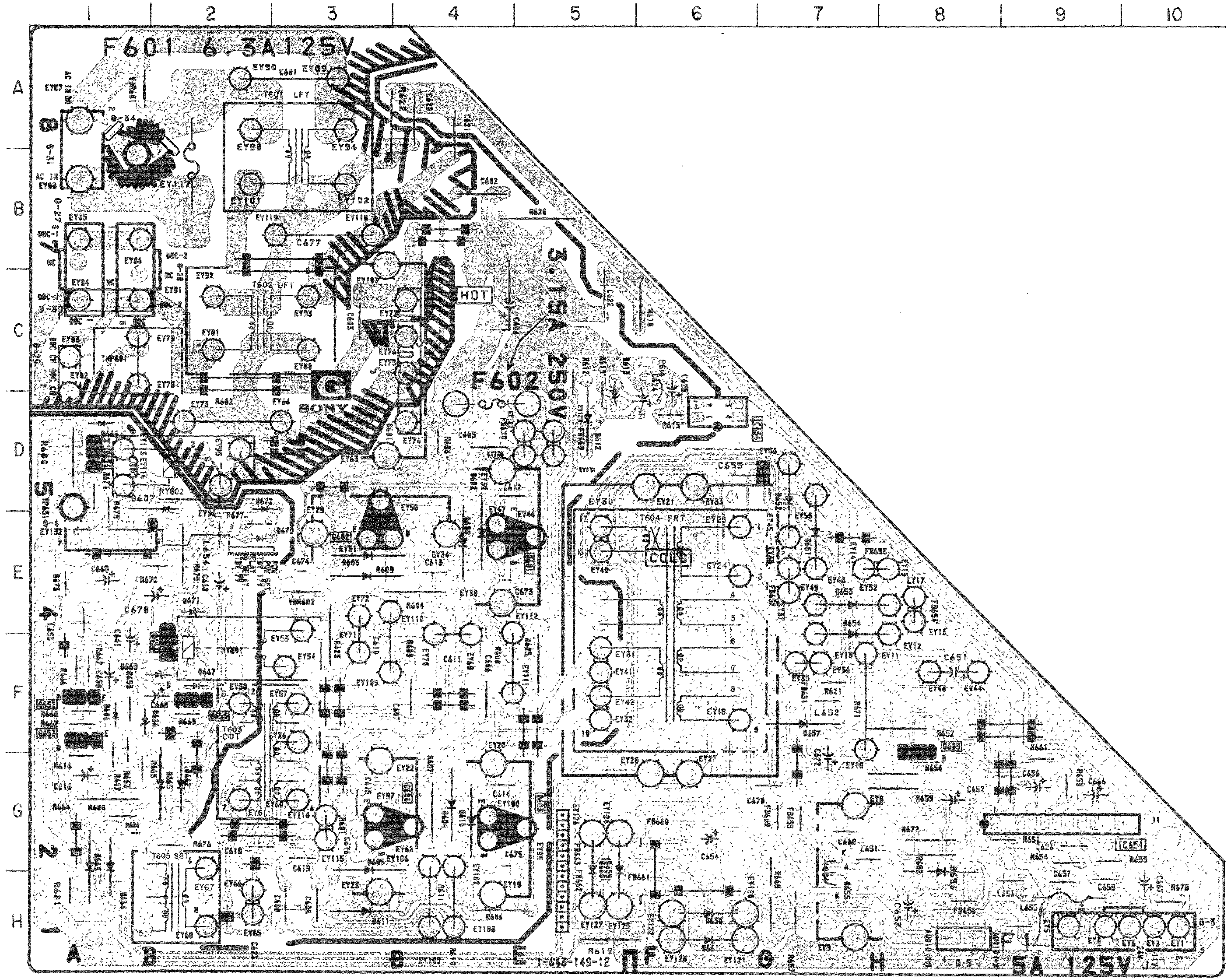
G [POWER SUPPLY, DEGAUSSING CIRCUIT] **E2** [SHARPNESS CONT, CHARACTOR GENERATER]

IC	
IIC651	G – 9
IC654	D – 6

TRANSISTOR	
Q601	E – 5
Q602	E – 3
Q603	G – 5
Q604	G – 4
Q605	F – 8
Q652	F – 1
Q653	F – 1
Q654	D – 1
Q655	F – 2
Q656	F – 2

DIODE	
D601	C – 4
D602	E – 4
D603	E – 3
D604	G – 4
D605	G – 3
D606	F – 1
D607	D – 2
D608	E – 4
D609	E – 3
D610	G – 4
D611	H – 3
D612	D – 5
D613	D – 5
D651	E – 7
D652	D – 7
D653	E – 7
D654	F – 7
D655	H – 7
D656	H – 8
D657	F – 7
D658	H – 6
D659	G – 5
D660	G – 5
D661	H – 6
D663	G – 1
D665	G – 2
D666	F – 1
D667	F – 2
D668	D – 1
D669	F – 2
D670	E – 2
D671	E – 2
D672	D – 2

– G BOARD –


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
F601 6.3A125V
T601 LFT
T602 LFT
HOT
G
SONY
3.15A 250V
F602
T604 PRT
IC651
IC654
A
B
D
E
F
G
H
1-643-149-12
5A 125V

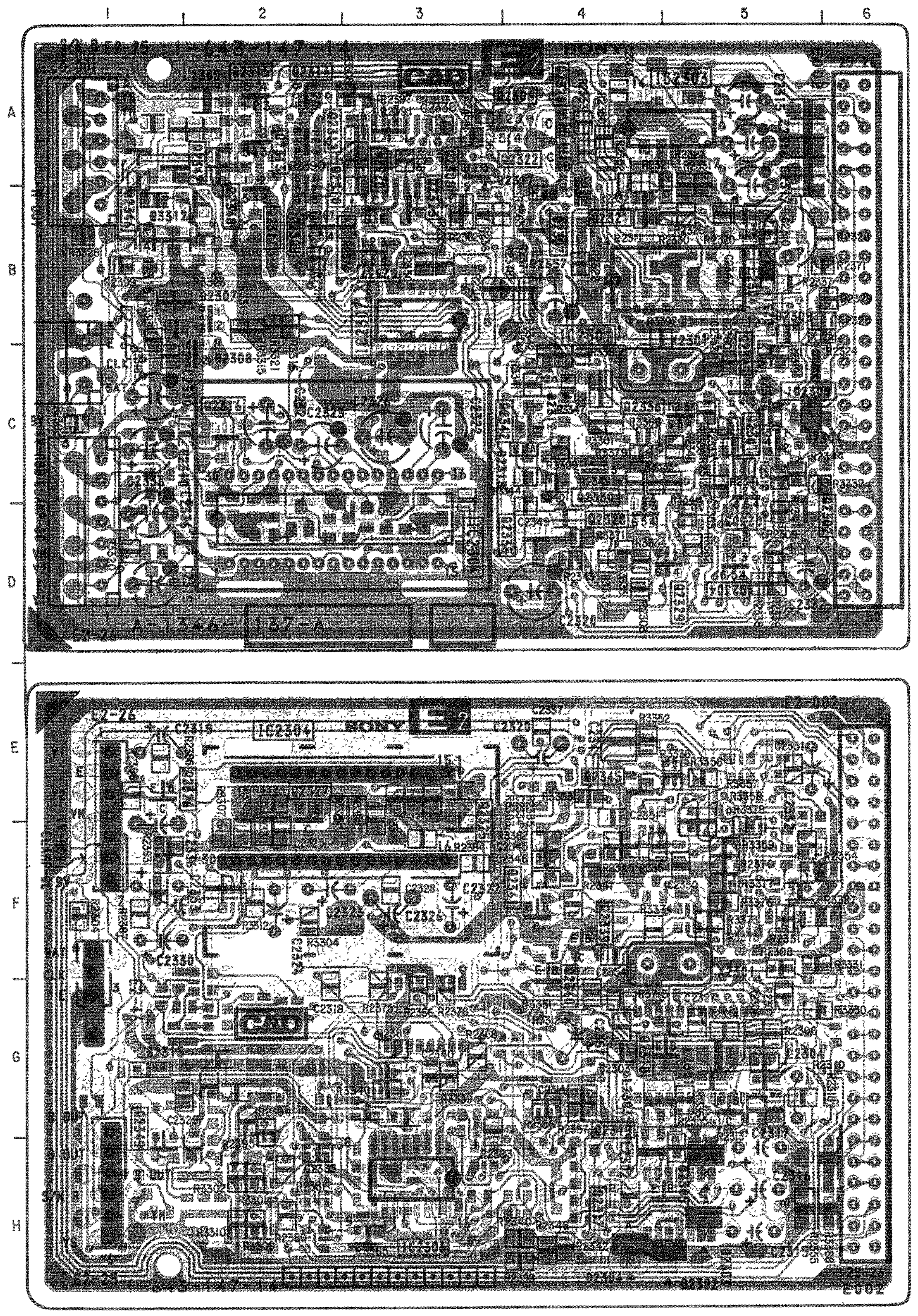
Note :
- ▨ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.

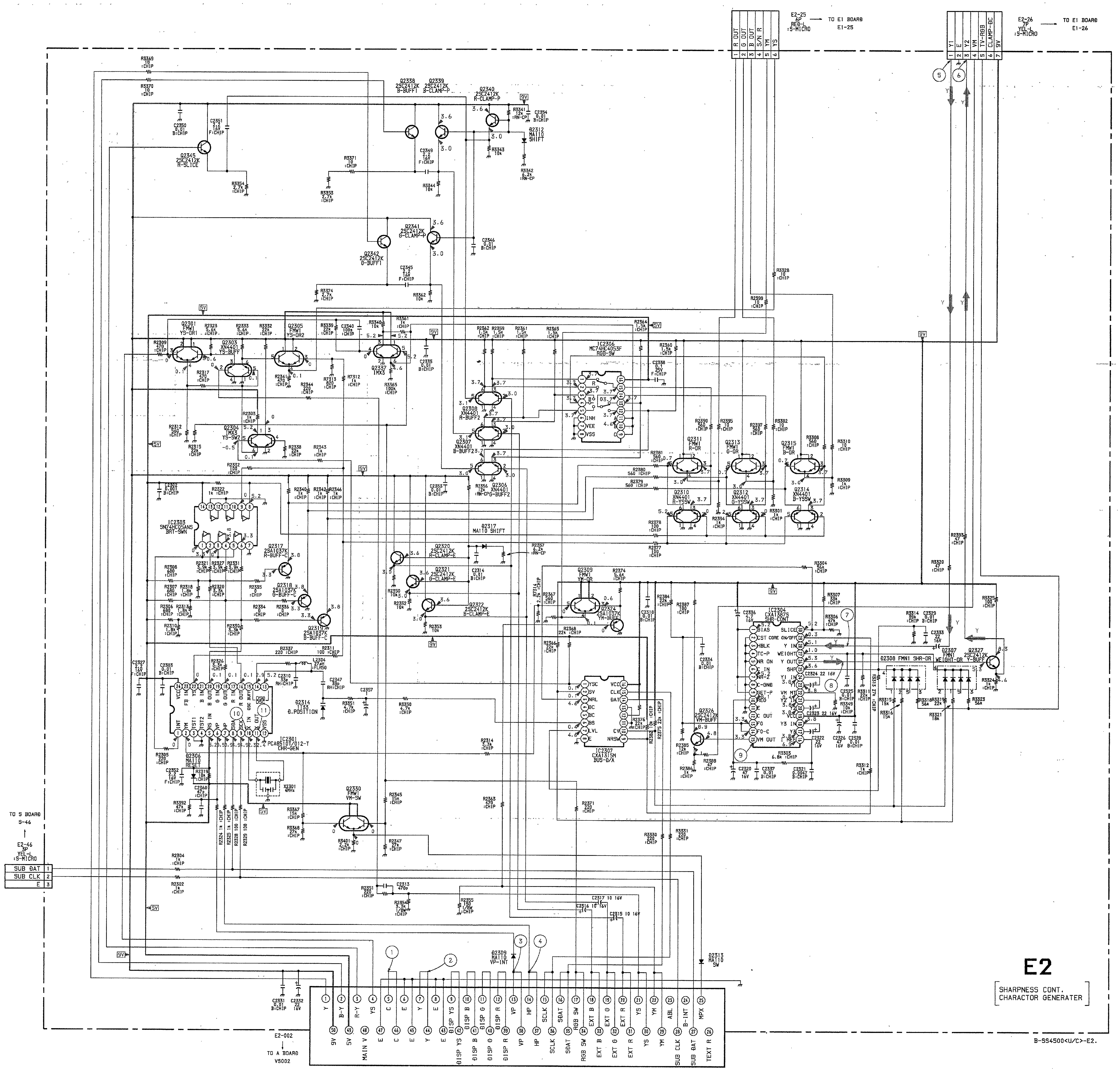
– E2 BOARD –

IC	
IC2031	B – 4
IC2303	A – 5
IC2304	D – 3, E – 2
IC2306	H – 3
IC2307	B – 3

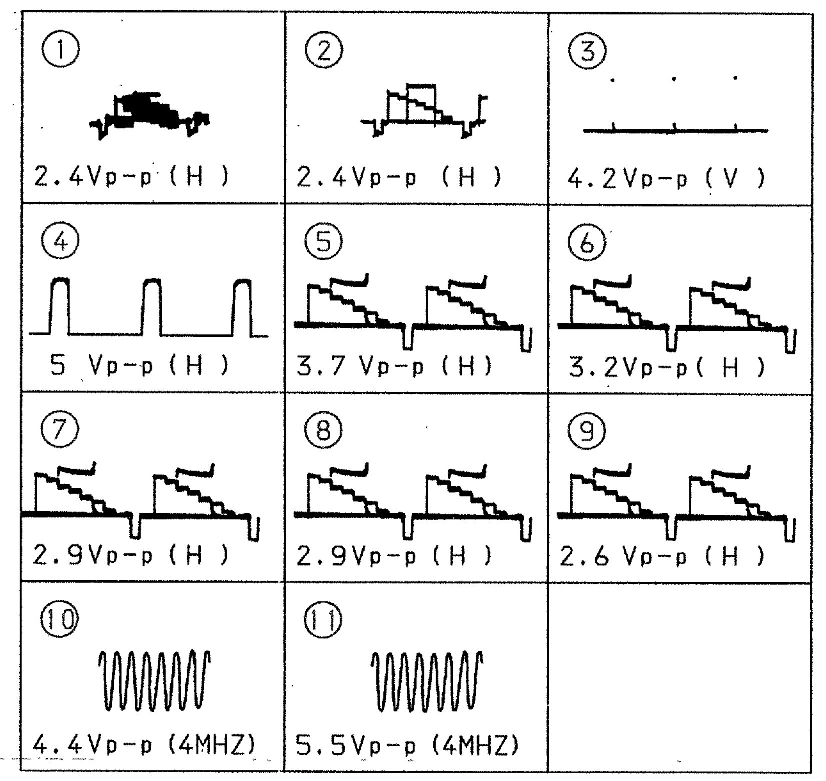
TRANSISTOR	
Q2301	C – 5
Q2303	C – 5
Q2304	D – 5
Q2305	C – 5
Q2306	A – 3
Q2307	B – 4
Q2308	A – 3
Q2309	B – 2
Q2310	A – 2
Q2311	A – 2
Q2312	A – 2
Q2313	A – 2
Q2314	A – 2
Q2315	A – 2
Q2317	H – 4
Q2318	G – 4
Q2319	G – 5
Q2320	A – 4
Q2321	A – 4
Q2322	A – 4
Q2324	B – 3
Q2326	E – 1
Q2327	E – 2
Q2328	D – 4
Q2329	D – 4
Q2330	C – 4
Q2336	C – 5
Q2337	B – 3
Q2339	F – 4
Q2340	F – 4
Q2341	F – 4

DIODE	
D2306	C – 5
D2307	B – 2
D2308	B – 2
D2309	B – 2
D2312	C – 4
D2313	C – 4
D2314	B – 5
D2317	A – 4

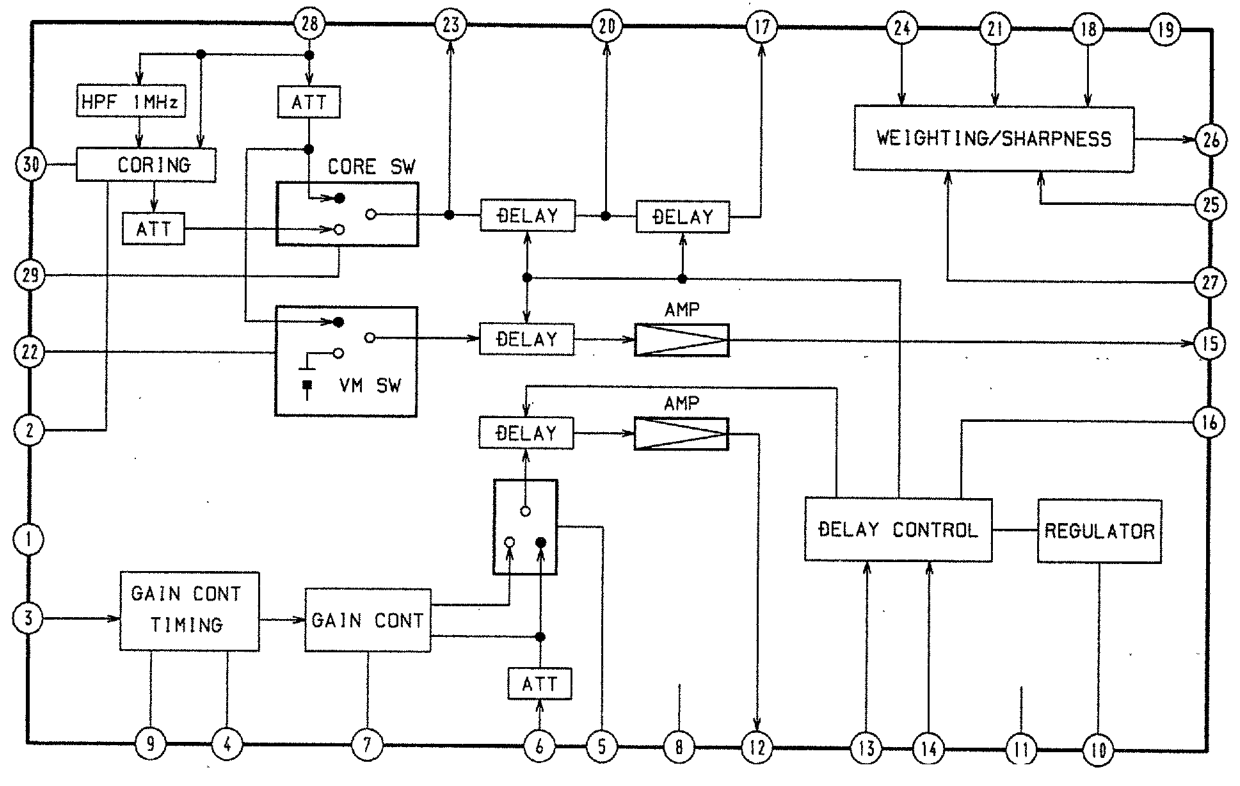

1
2
3
4
5
6
A
B
C
D
E
F
G
H
IC2303
A-1346-137-A
IC2304
SONY
E2
IC2306


E2
SHARPNESS CONT.
CHARACTOR GENERATER
B-SS4500<U/C>-E2.
E2-25 TO E1 BOARD E1-25
E2-26 TO E1 BOARD E1-26
TO S BOARD S-46
SUB DAT
SUB CLK
E2-002 TO A BOARD V5002
IC2304 CXA1387S
IC2306 MC74HC4053F
IC2307 CXA1315M BUS-D/A
IC2303 SN74HC04ANS
IC2301 PCA8510T/012-T CHR-GEN

• E2 BOARD WAVEFORMS

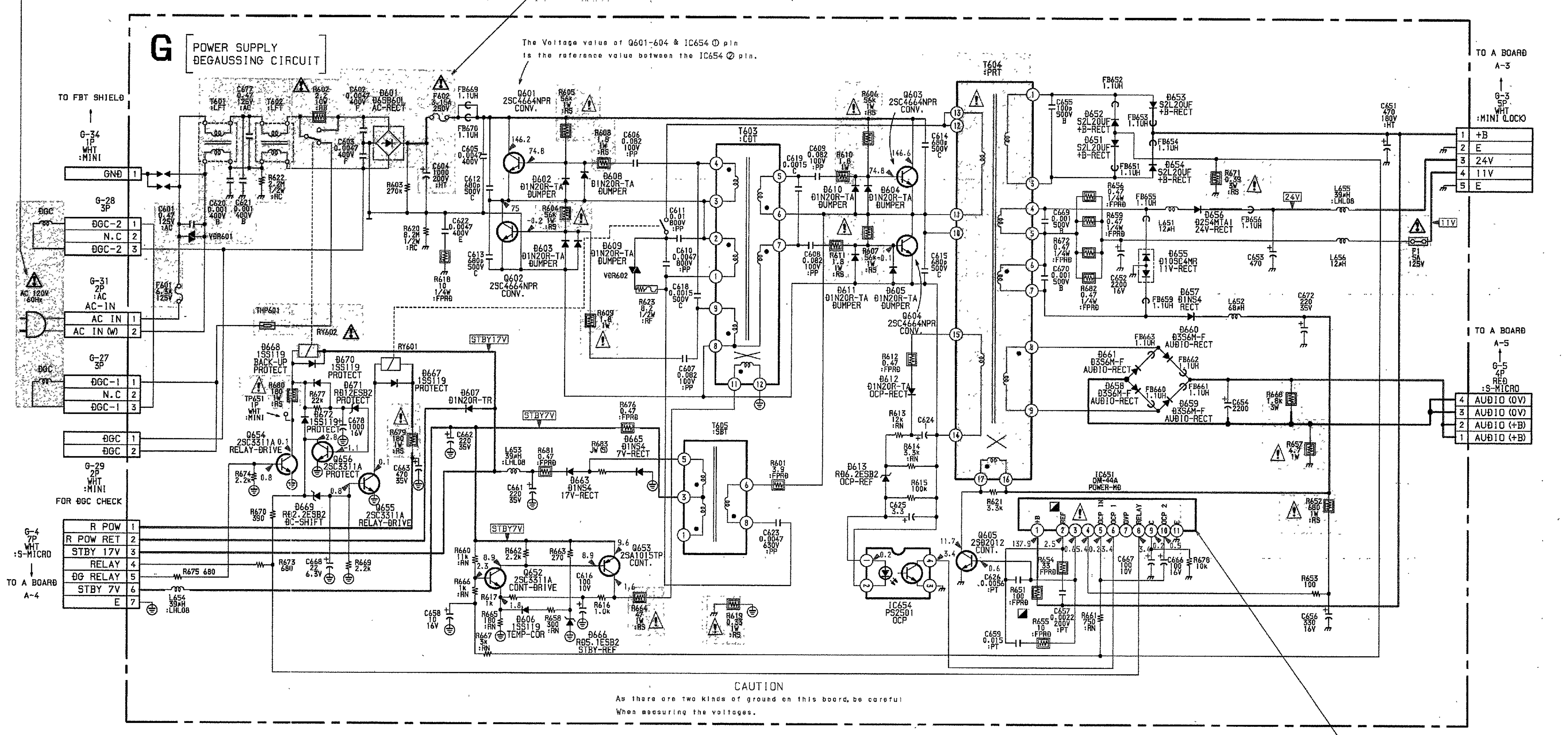

① 2.4Vp-p (H)
② 2.4Vp-p (H)
③ 4.2Vp-p (V)
④ 5 Vp-p (H)
⑤ 3.7 Vp-p (H)
⑥ 3.2Vp-p (H)
⑦ 2.9Vp-p (H)
⑧ 2.9Vp-p (H)
⑨ 2.6 Vp-p (H)
⑩ 4.4Vp-p (4MHZ)
⑪ 5.5Vp-p (4MHZ)

• E2 BOARD IC2304 CXA1387S


HPF 1MHz
CORING
ATT
ATT
CORE SW
VM SW
DELAY
DELAY
DELAY
DELAY
AMP
AMP
WEIGHTING/SHARPNESS
DELAY CONTROL
REGULATOR
GAIN CONT TIMING
GAIN CONT
ATT

CAUTION (US MODEL ONLY)
This set is equipped with a polarized ac power cord plug (one blade of the plug is wider than the other). When replacing the ac power cord, be sure to connect it with specified part number as shown in this diagram.

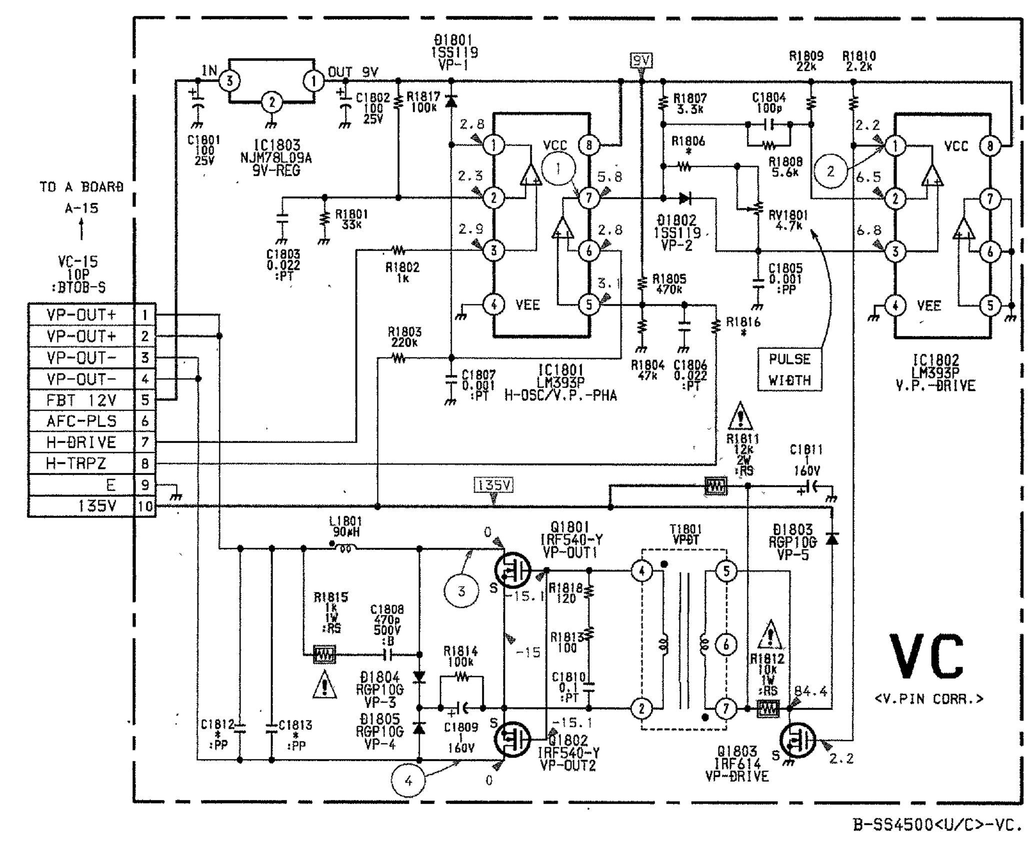
CAUTION
When taking a broken fuse (F602) off, discharge across C604 to avoid shock hazard.


G
POWER SUPPLY
DEGAUSSING CIRCUIT
The Voltage value of Q601-604 & IC654 ① pin
is the reference value between the IC654 ② pin.
TO FBT SHIELD
TO A BOARD A-3
TO A BOARD A-5
TO A BOARD A-4
FOR DGC CHECK
IC654 PS2501 OCP

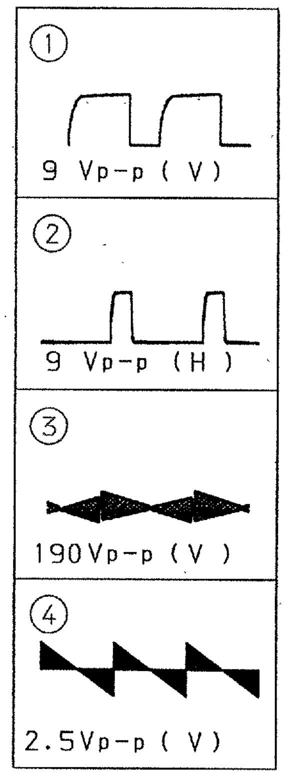
CAUTION
As there are two kinds of ground on this board, be careful When measuring the voltages.

B-SS4496<U/C>-G..

CAUTION
When replacing IC651, be sure to check the +B line voltage value. Refer to the Safety Adjustment Section.

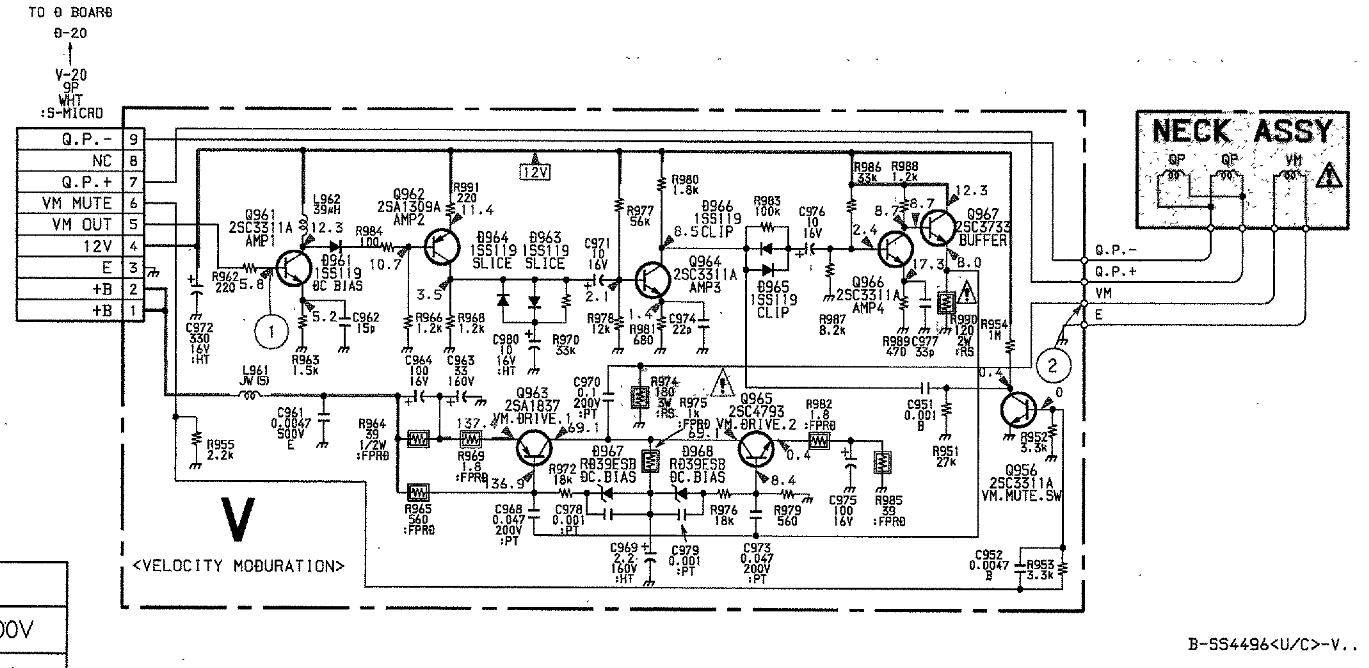

VC
<V.PIN CORR.>
TO A BOARD A-15
B-SS4500<U/C>-VC.

• VC BOARD WAVEFORMS

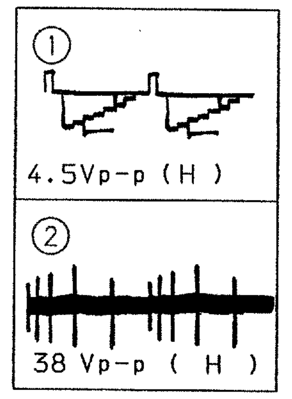

①
9 Vp-p (V)
②
9 Vp-p (H)
③
190Vp-p (V)
④
2.5Vp-p (V)

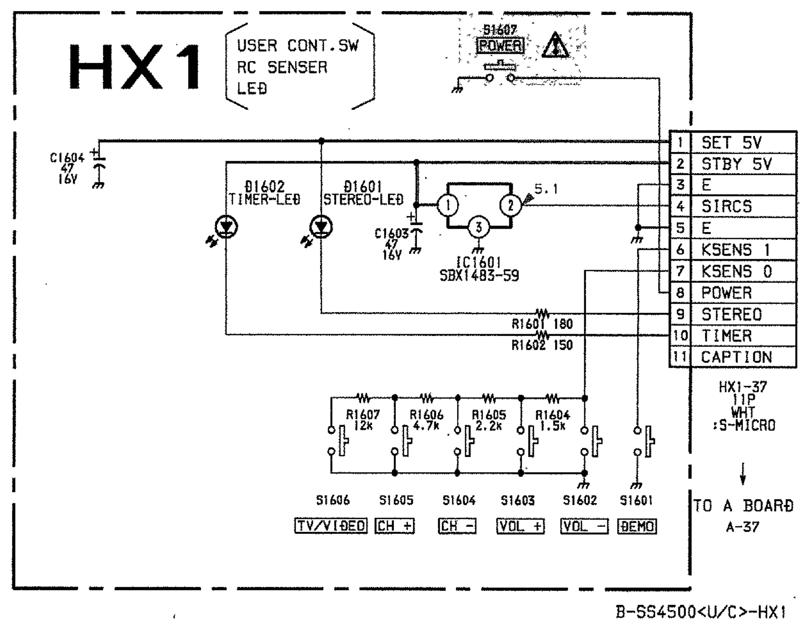
• VC BOARD ＊MARK

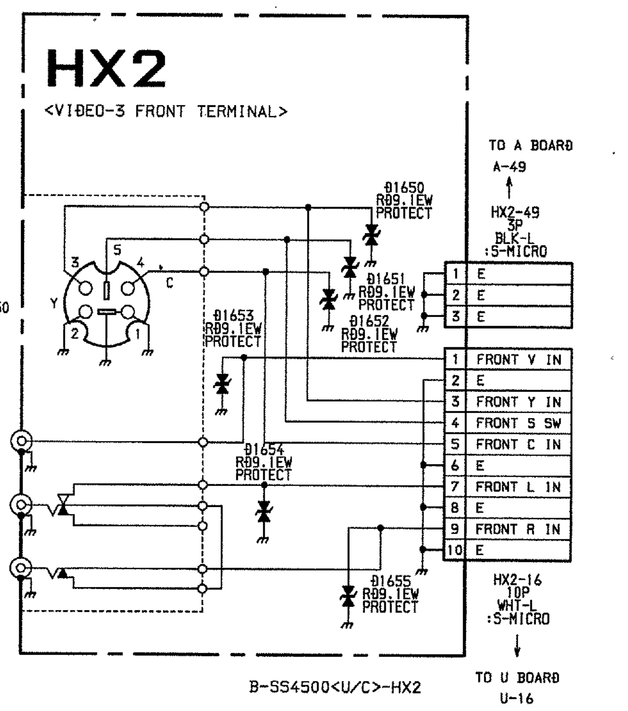
Ref. No.	27INCH		32INCH	
C1812	0.16	200V	0.24	200V
C1813	0.047	200V	Not mounted	
R1806	6.8K	1/4W	8.2K	1/4W
R1816	27K	1/4W	47K	1/4W

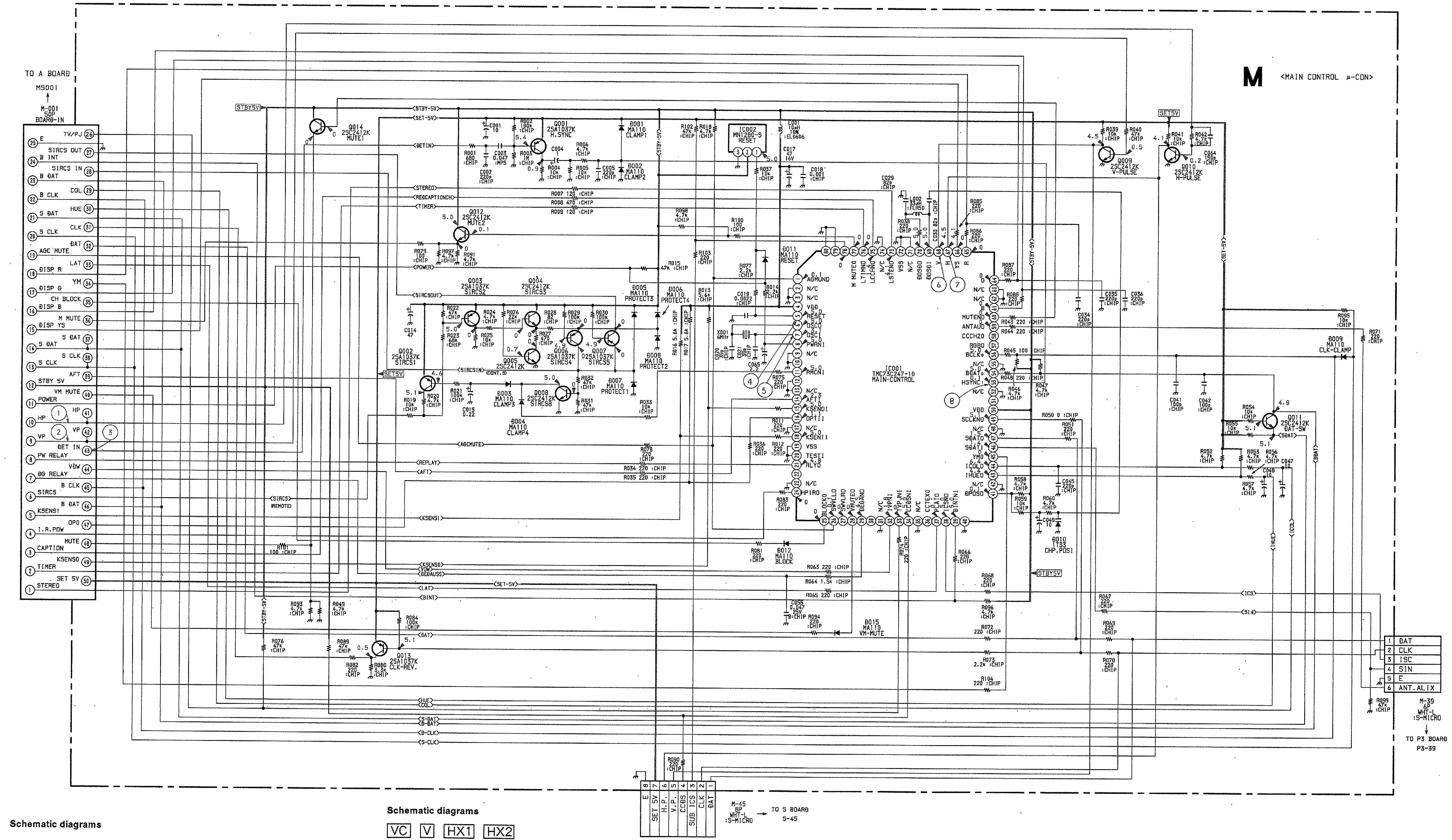

V
<VELOCITY MODURATION>
NECK ASSY
TO B BOARD B-20
B-SS4496<U/C>-V..

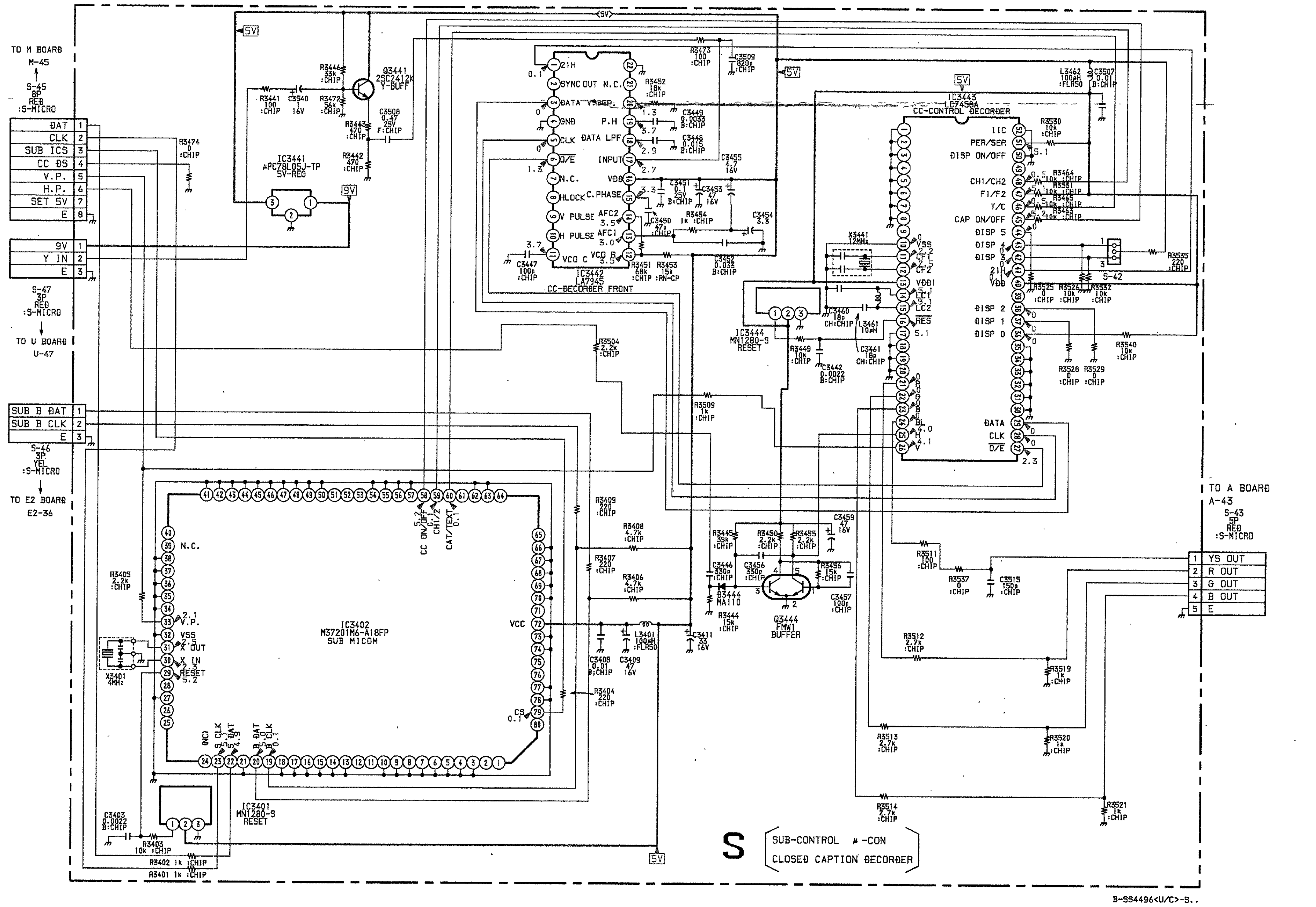
• V BOARD WAVEFORMS


①
4.5Vp-p (H)
②
38 Vp-p (H)

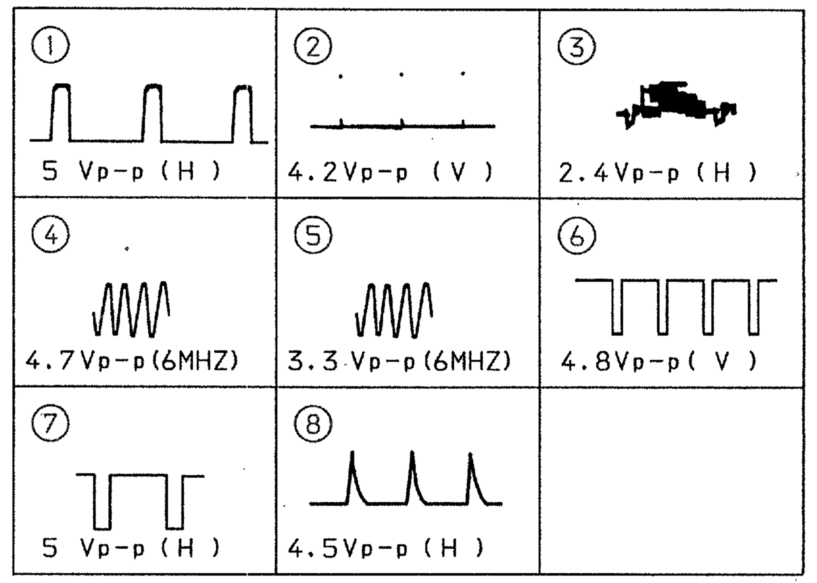

HX1
USER CONT.SW
RC SENSER
LED
TO A BOARD A-37
B-SS4500<U/C>-HX1


HX2
<VIDEO-3 FRONT TERMINAL>
TO A BOARD A-49
TO U BOARD U-16
B-SS4500<U/C>-HX2

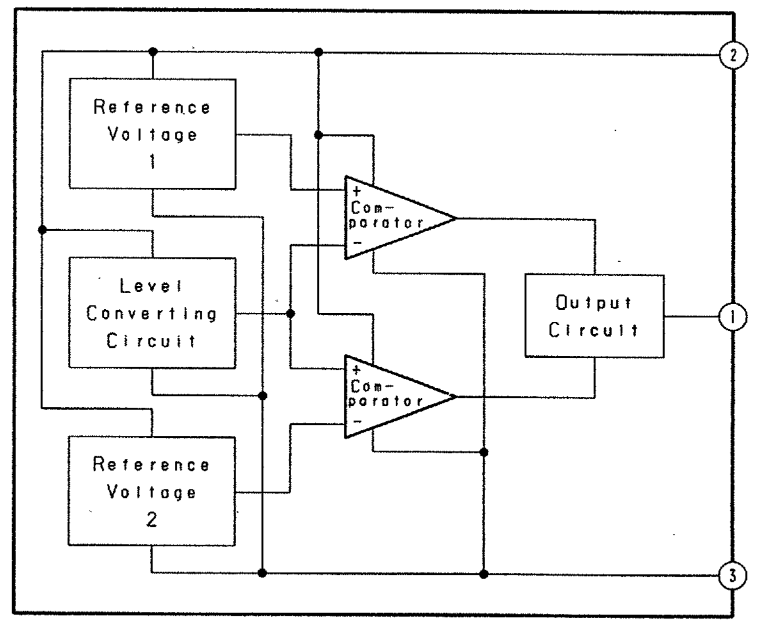

M
<MAIN CONTROL μ-CON>
TO A BOARD M5001
IC001
MAIN-CONTROL
TO S BOARD S-45
TO P3 BOARD P3-39


S
SUB-CONTROL μ-CON
CLOSED CAPTION DECORDER
IC3402
SUB MICOM
TO M BOARD M-45
TO U BOARD U-47
TO E2 BOARD E2-36
TO A BOARD A-43
B-SS4496<U/C>-S..

• M BOARD WAVEFORMS


①
5 Vp-p (H)
②
4.2Vp-p (V)
③
2.4Vp-p (H)
④
4.7Vp-p (6MHZ)
⑤
3.3 Vp-p(6MHZ)
⑥
4.8Vp-p(V)
⑦
5 Vp-p (H)
⑧
4.5Vp-p (H)

• M BOARD IC002 MN1280-S


Reference Voltage 1
Level Converting Circuit
Reference Voltage 2
Comparator
Comparator
Output Circuit
①
②
③

Schematic diagrams

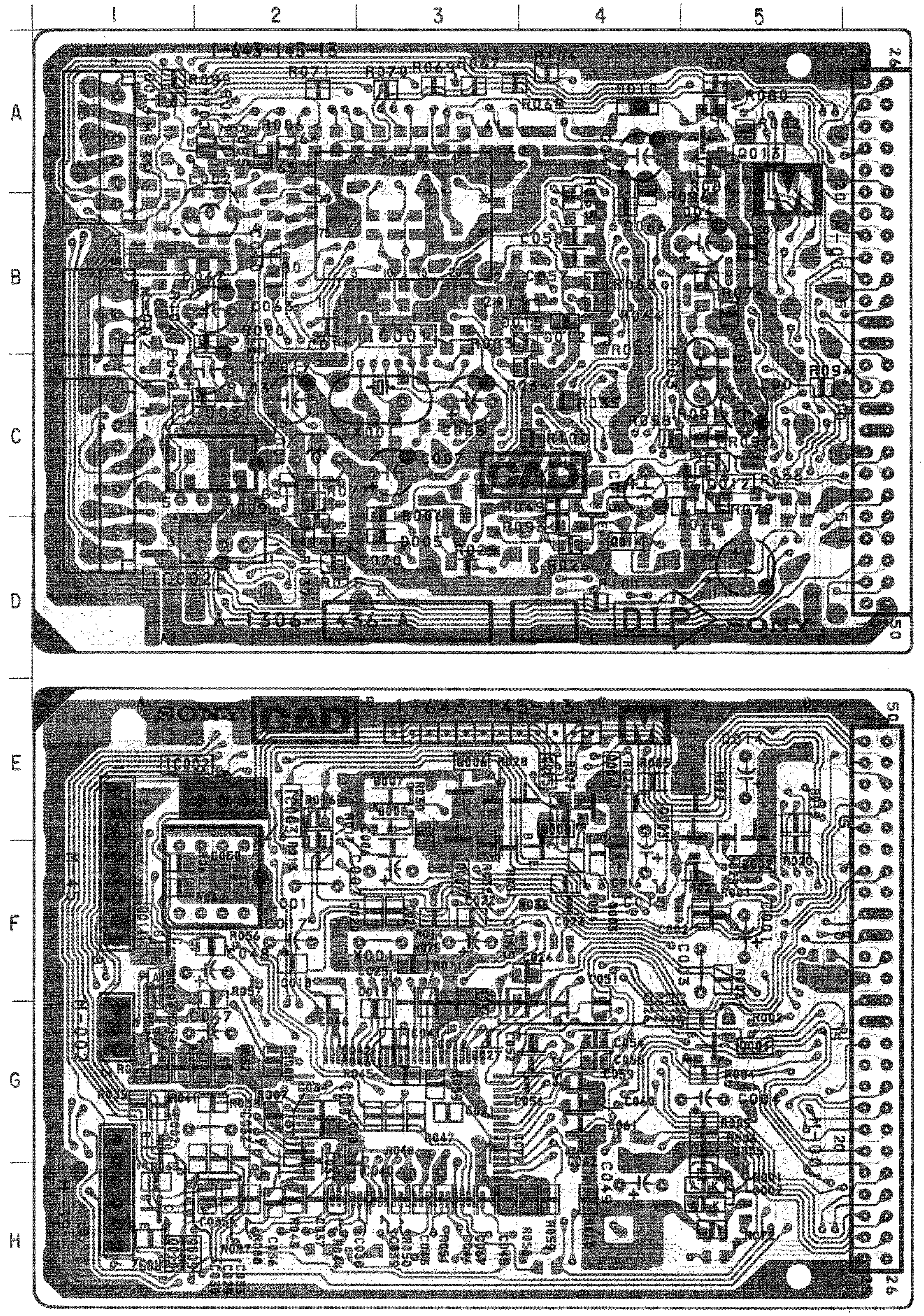
← E2 G boards

Schematic diagrams

VC V HX1 HX2
M S boards →

M [MAIN CONTROL μ – CON] **S** [SUB – CONTROL, μ – CON, CLOSED CAPTION DECORDER] **HX1** [USER CONTROL SW, RC SENSE, LED] **HX2** [VIDEO – 3 FRONT TERMINAL] **V** [VELOCITY MODURATION] **VC** [V. PIN CORR]

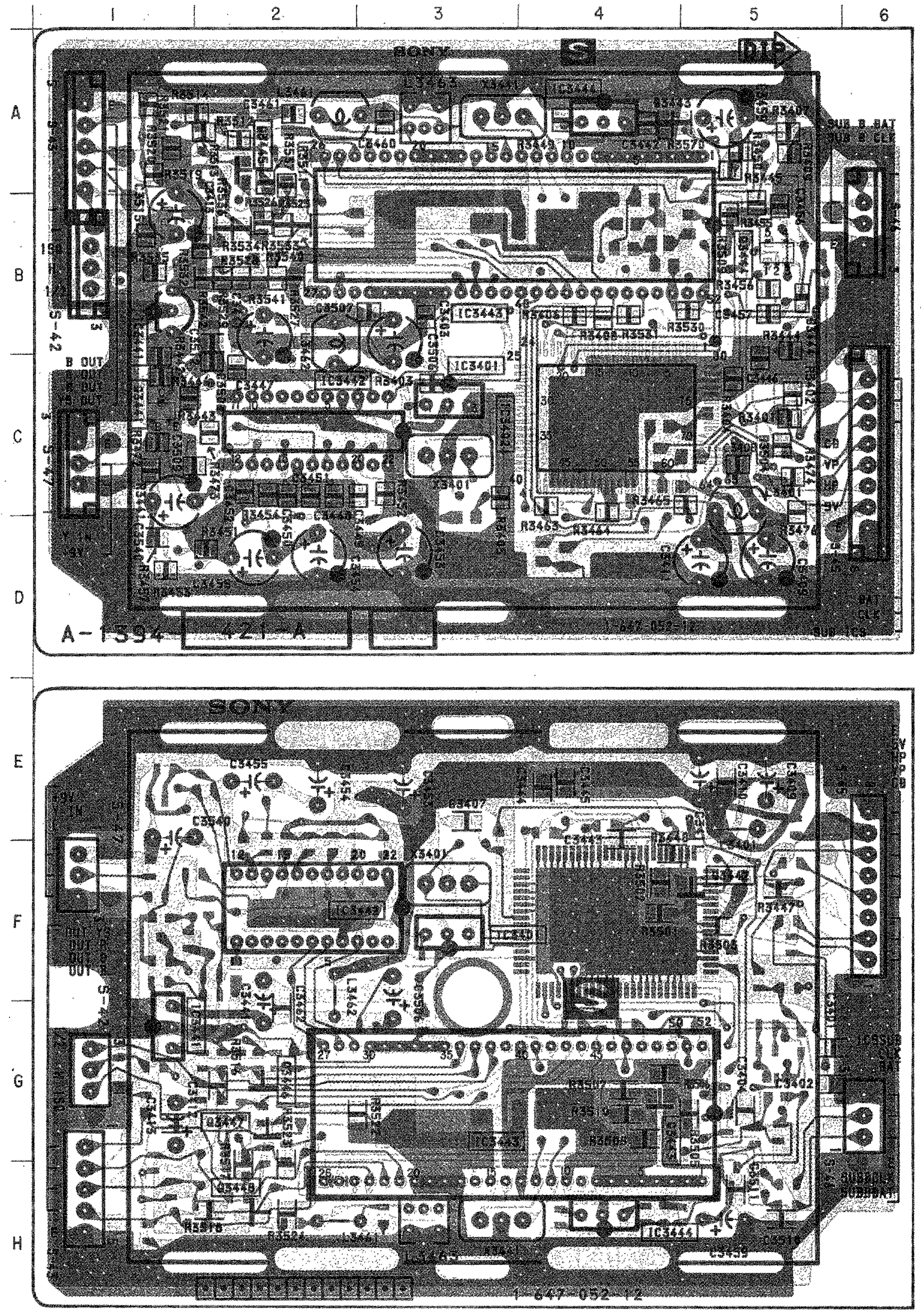
– M BOARD –


1
2
3
4
5
A
B
C
D
E
F
G
H
1-643-145-13
CAD
SONY
DIP
26
50

IC	
IC001	C – 1
IC002	D – 2, E – 2
TRANSISTOR	
Q001	G – 5
Q009	G – 1
Q010	H – 1
Q011	F – 1
Q012	C – 5
Q013	A – 5
Q014	C – 4
DIODE	
D001	H – 5
D002	H – 5
D009	F – 1
D010	A – 4
D011	D – 2
D012	B – 4
D014	A – 1
D015	B – 4

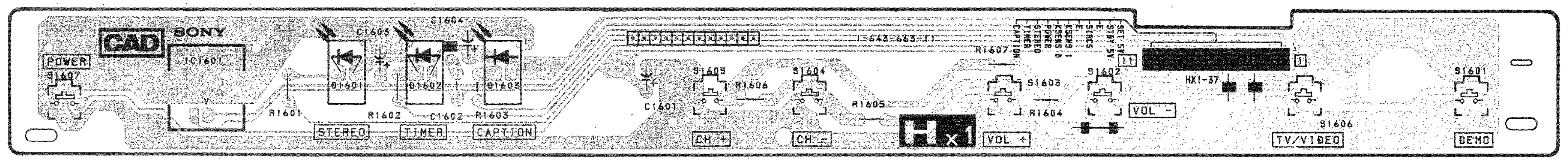
Note :
- ▨ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.

– S BOARD –

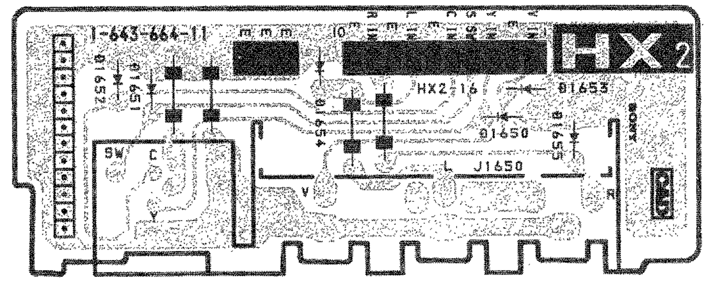

1
2
3
4
5
6
A
B
C
D
E
F
G
H
SONY
S
DIP
A-1394-421-A
1-647-052-12

IC	
IC3401	C – 3, F – 3
IC3402	C – 4
IC3441	B – 1, G – 1
IC3442	C – 2, F – 2
IC3443	B – 3, G – 3
IC3444	A – 4, H – 4
TRANSISTOR	
C3441	C – 1
C3444	B – 5
DIODE	
D3444	B – 5

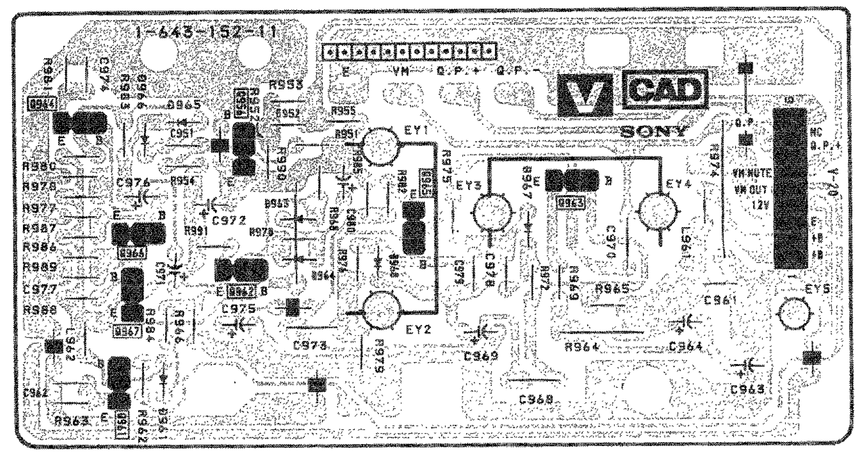
– HX1 BOARD –


CAD
SONY
POWER
1-643-663-11
STEREO
TIMER
CAPTION
CH +
CH –
VOL +
VOL –
TV/VIDEO
DEMO
Hx1

– HX2 BOARD –

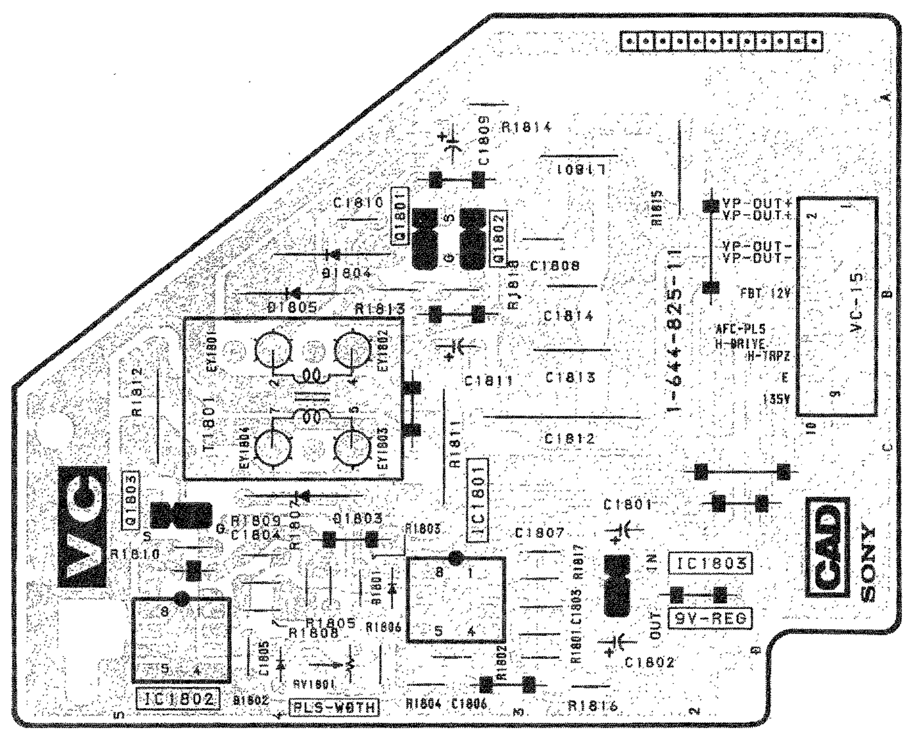

1-643-664-11
HX2
CAD

– V BOARD –


1-643-152-11
V
CAD
SONY

Note :
- ▨ : Pattern from the side which enables seeing.
- ■ : Pattern of the rear side.

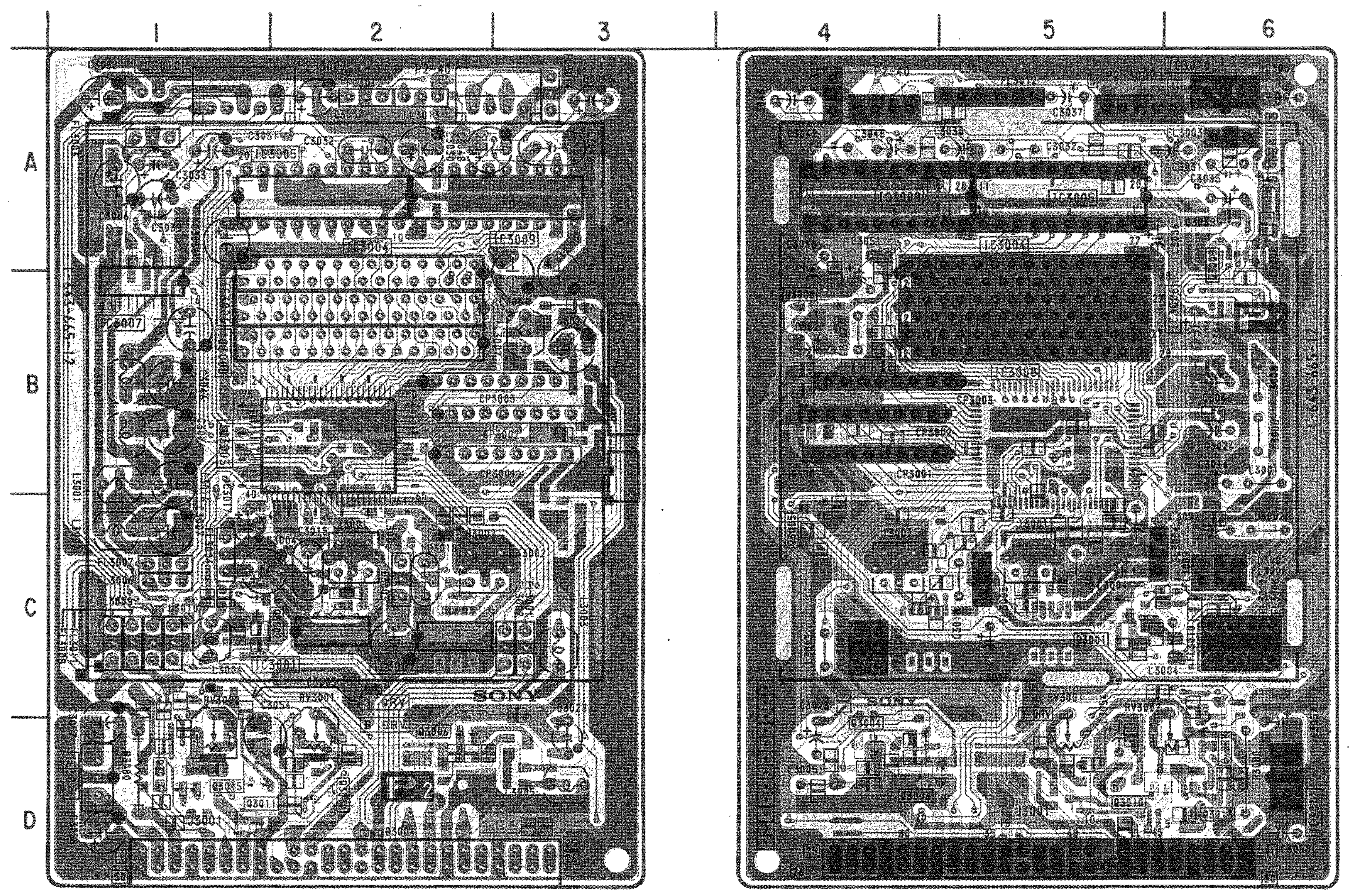
– VC BOARD –


1-644-825-11
VC
CAD
SONY
IC1801
IC1802
IC1803

P2 [MPX PICTURE IN PICTURE CIRCUIT] **P3** [2ND CONT, μ − CON FOR PIP, 2ND TUNER − VIF/SIF FOR PIP, Y/C JUNGLE FOR PIP, ANT SW CONT] **P4** [DIGITAL COMB FILTER]

– P2 BOARD –

IC	
IC3001	C − 2
IC3002	C − 2
IC3003	B − 2
IC3004	A − 2, B − 5
IC3005	A − 2, A − 5
IC3006	B − 2, B − 5
IC3007	B − 1
IC3008	B − 2, B − 5
IC3009	A − 3, A − 4
IC3010	A − 1, A − 6
IC3011	D − 1, D − 6
TRANSISTOR	
Q3001	C − 5
Q3002	C − 1
Q3003	D − 4
Q3004	D − 4
Q3005	C − 4
Q3006	D − 2
Q3007	B − 4
Q3008	B − 4
Q3009	A − 6
Q3010	D − 5
Q3011	D − 1
Q3012	D − 2
Q3013	D − 6
Q3014	D − 1
Q3015	D − 1
DIODE	
D3002	C − 2
D3003	C − 2
D3004	D − 2
VARIABLE RESISTOR	
RV3001	D − 2, D − 5
RV3002	D − 1, D − 6



Note :

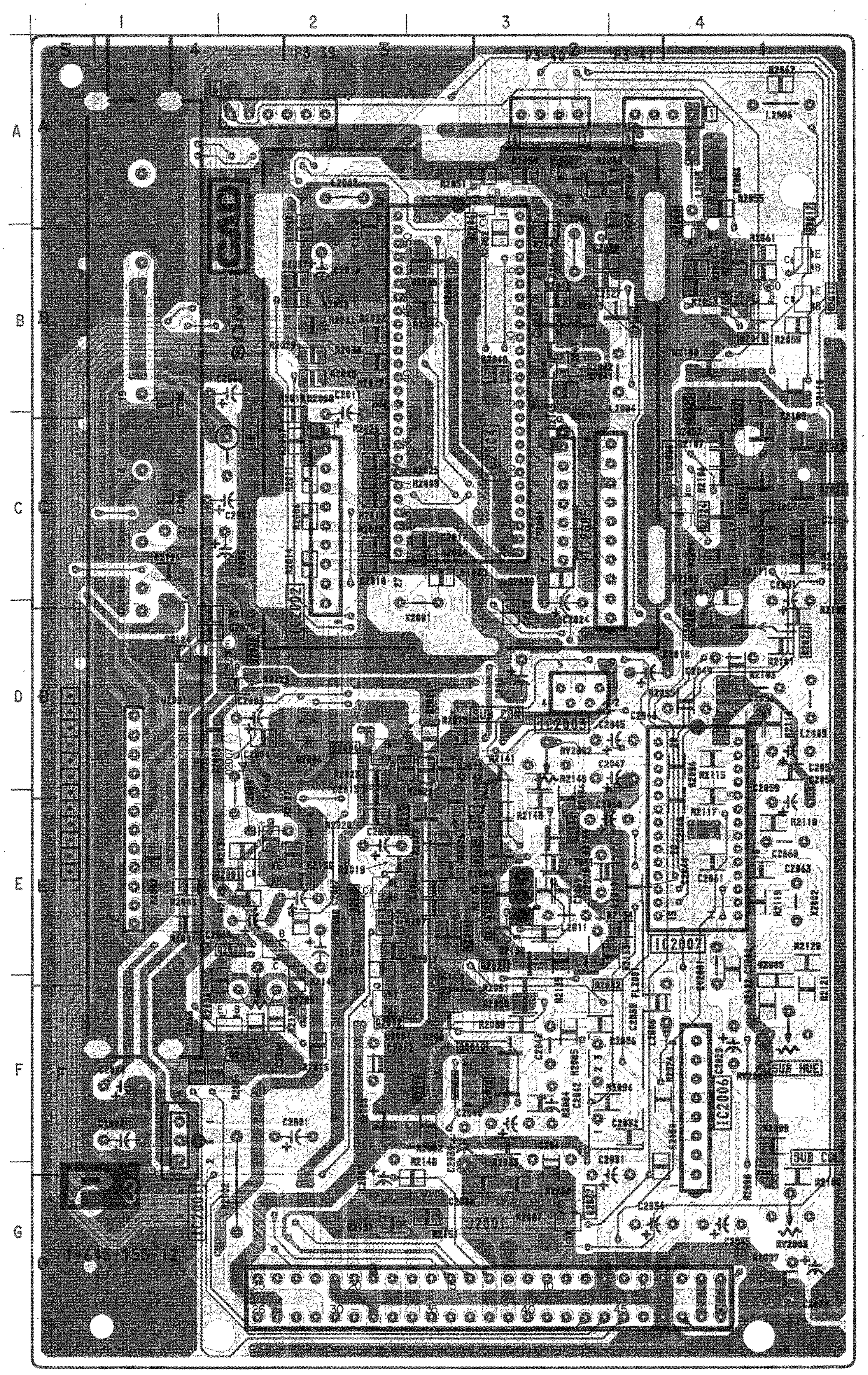
- ░ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

IC	
IC2001	F − 1
IC2002	C − 2
IC2003	D − 3
IC2004	C − 2
IC2005	C − 3
TRANSISTOR	
Q2001	E − 1
Q2002	F − 2
Q2003	E − 3
Q2004	D − 3
Q2005	B − 3
Q2006	A − 3
Q2007	A − 3
Q2008	E − 1
Q2009	A − 9
Q2010	B − 4
Q2011	B − 4
Q2012	B − 4
Q2030	D − 1
Q2031	F − 1
Q2036	C − 4
Q2037	G − 3
DIODE	
D2006	D − 2
D2007	D − 1
VARIABLE RESISTOR	
RV2001	F − 1

Note :

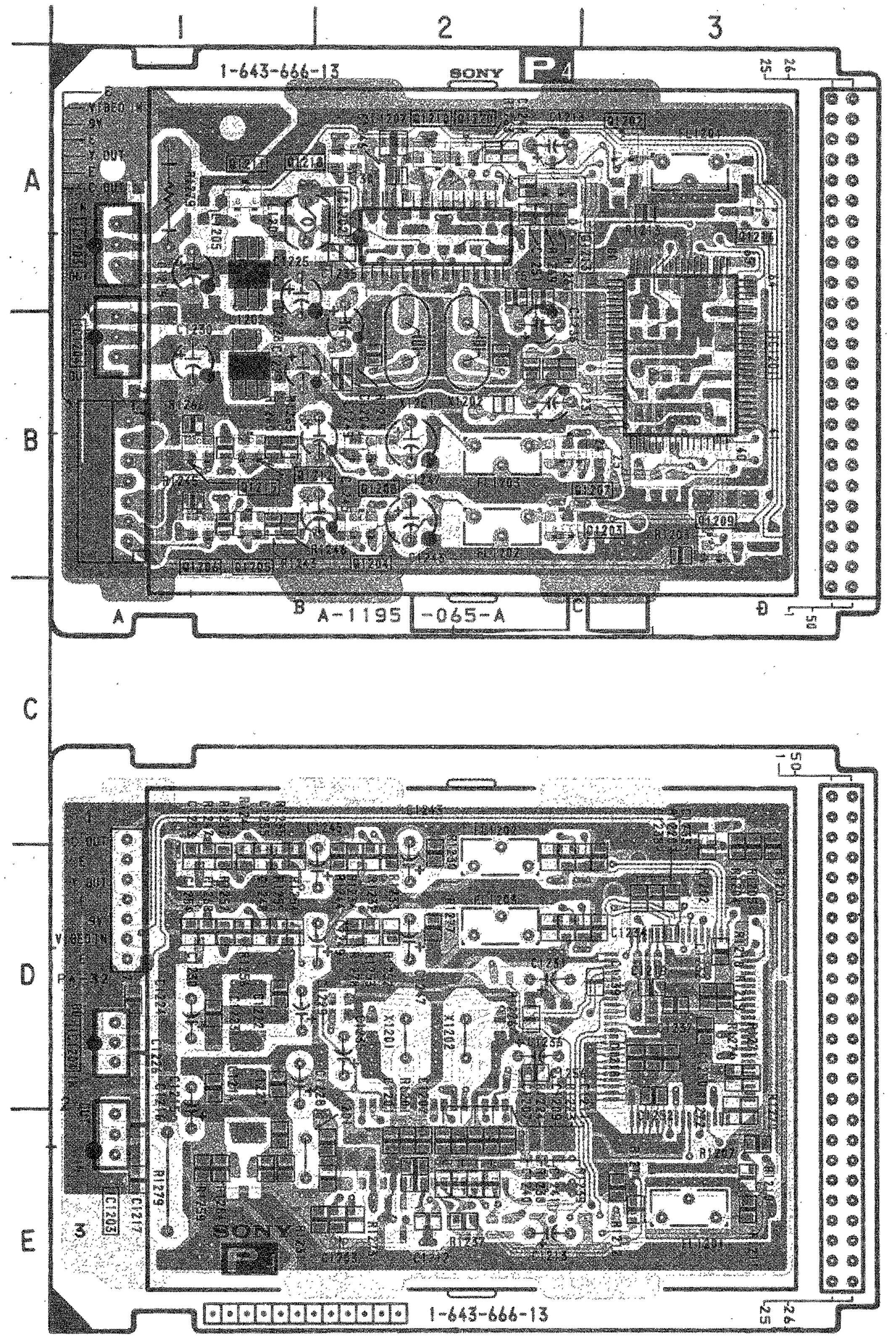
- ░ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

– P3 BOARD –



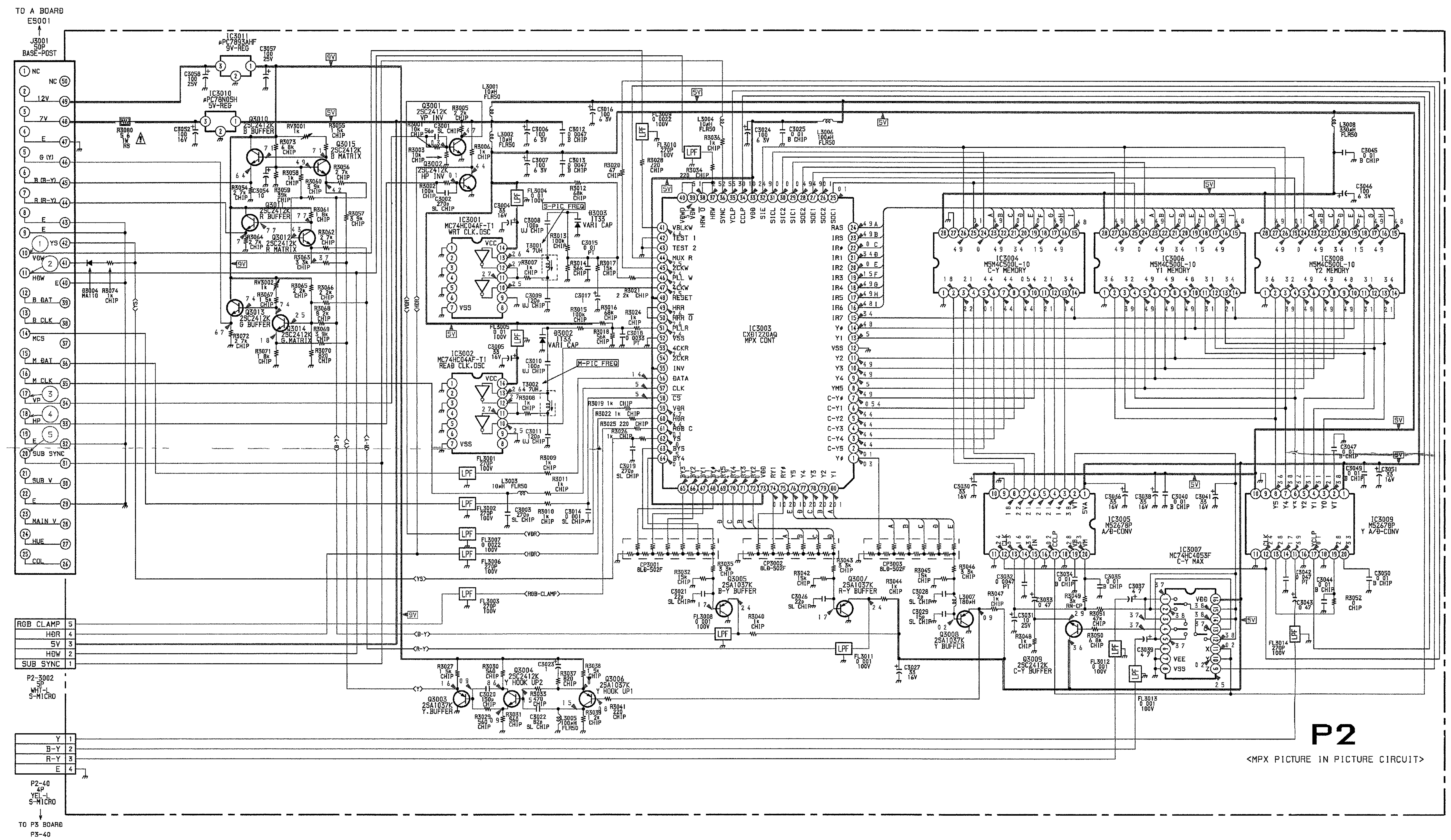
IC	
IC1201	B − 3
IC1202	A − 2
IC1203	A − 1, E − 1
IC1204	B − 1, D − 1
TRANSISTOR	
Q1202	A − 3
Q1203	B − 2
Q1204	B − 2
Q1205	B − 1
Q1206	B − 1
Q1207	B − 2
Q1208	B − 2
Q1209	B − 3
Q1211	A − 1
Q1212	B − 1
Q1213	A − 2
Q1214	A − 3
Q1215	B − 1
Q1218	A − 2
Q1220	A − 2

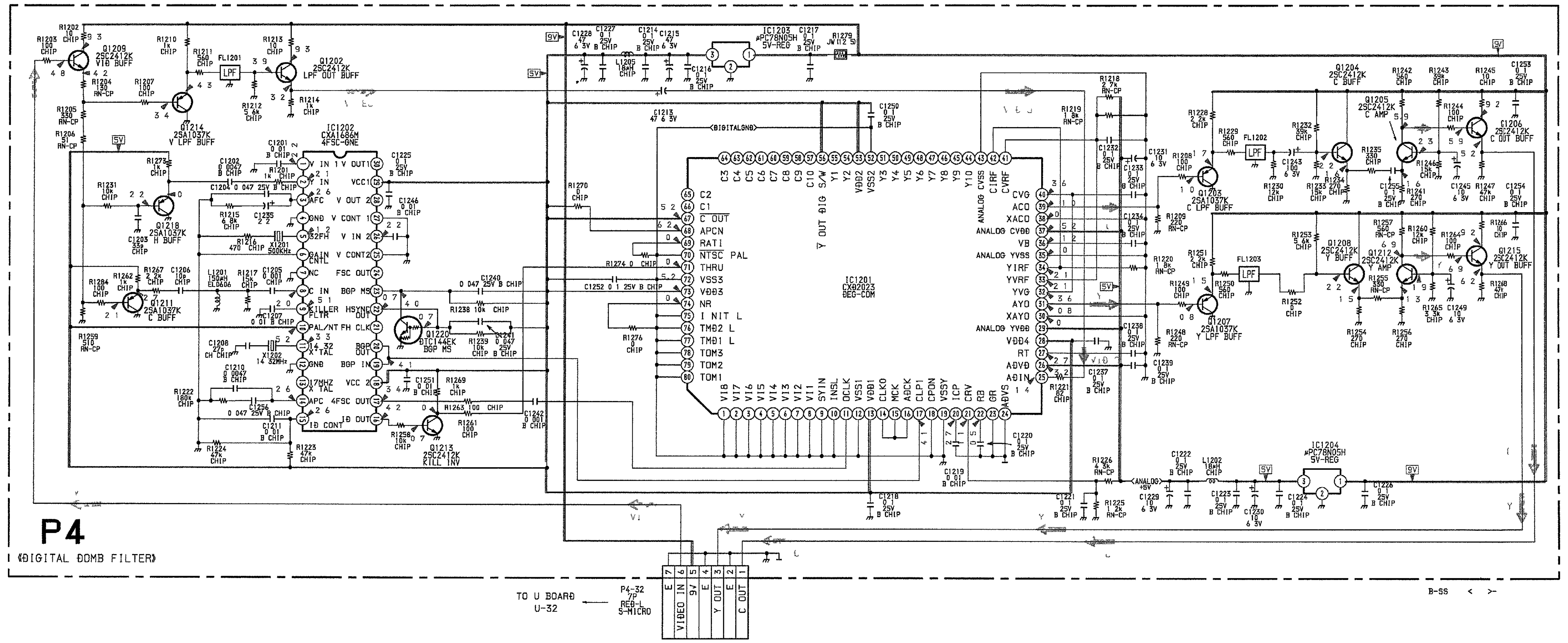
– P4 BOARD –



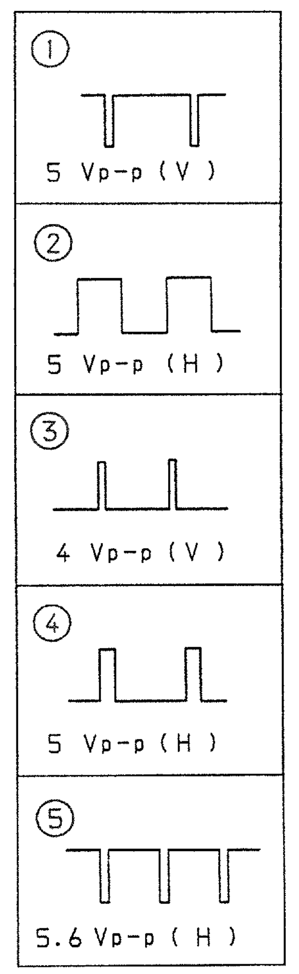
Note :

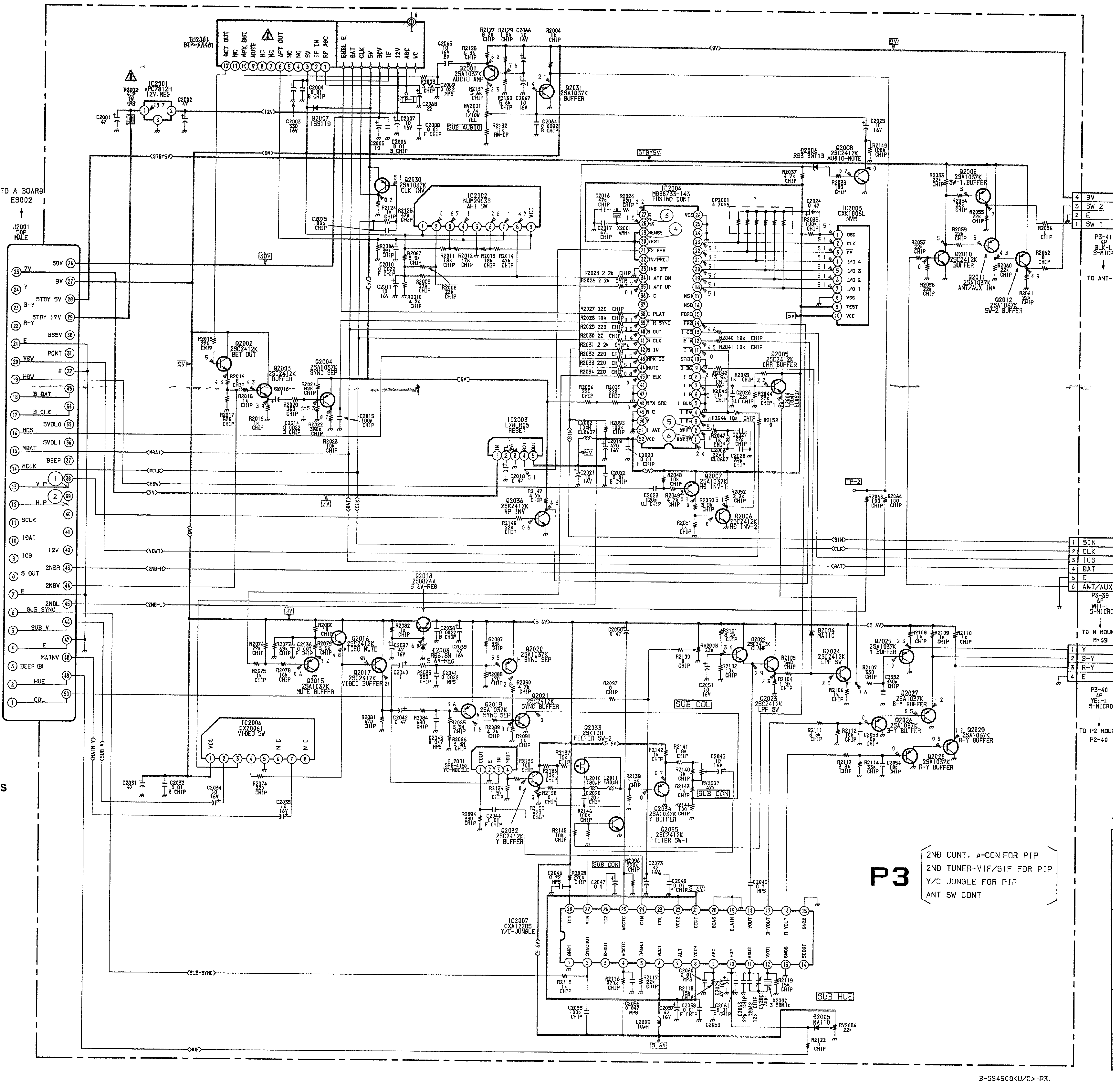
- ░ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


TO A BOARD E5001
J5001 BASE-POST
IC5003 CXD1126Q MPX CONT
IC5004 MSM514260-10 C-Y MEMORY
IC5008 MSM514260-10 Y1 MEMORY
IC5009 MSM514260-10 Y1 MEMORY
IC5005 A/D-CONV
IC5009 Y A/D-CONV
IC5007 MC74HC4053F C-Y MAX
IC5011 5V-REG
IC5010 5V-REG
RGB CLAMP
HDR
5V
HDW
SUB SYNC
P2-3002
Y
B-Y
R-Y
E
P2-40 TO P3 BOARD P3-40
P2
<MPX PICTURE IN PICTURE CIRCUIT>

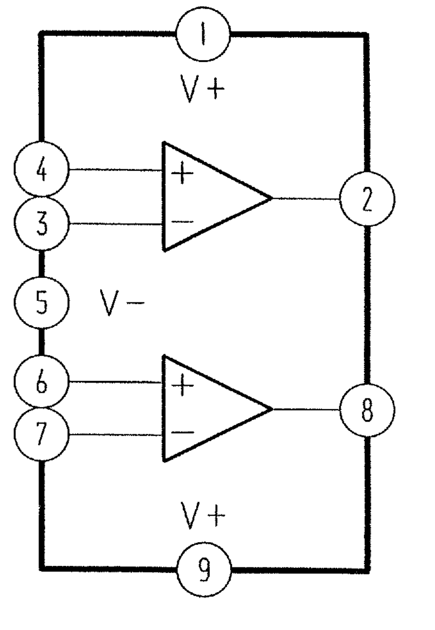

IC1202 CXA1184M
IC1201 CXD2023 DCC-COMB
IC1203 5V-REG
IC1204 5V-REG
P4
<DIGITAL COMB FILTER>
TO U BOARD U-32
P4-32 S-MICRO
VIDEO IN
Y OUT
C OUT

• P2 BOARD WAVEFORMS

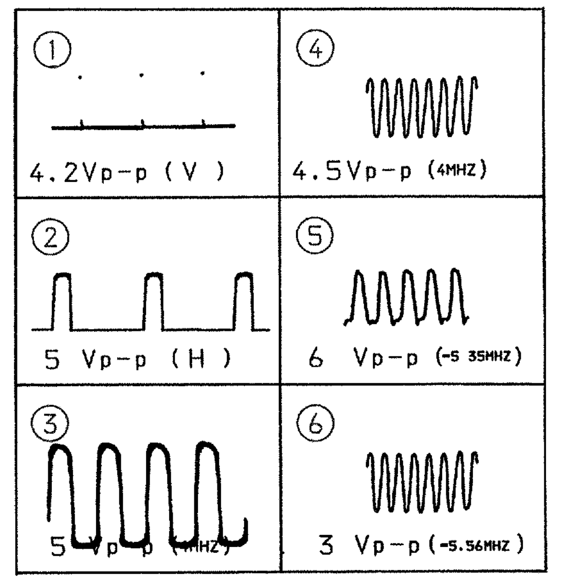

①
5 Vp-p (V)
②
5 Vp-p (H)
③
4 Vp-p (V)
④
5 Vp-p (H)
⑤
5.6 Vp-p (H)


TO A BOARD ES002
J2001 MALE
TU2001 BTF-XA401
IC2001 12V-REG
IC2003 NJM2903S
IC2004 CXP80424-143 TUNING CONT
IC2005 CXP1032L NVM
IC2006 CX20090 VIDEO SW
IC2007 CXA1213BS Y/C JUNGLE
SUB COL
SUB HUE
SUB CON
SIN
CLK
ICS
DAT
E
ANT/AUX
P3-X9 TO ANT-SW
Y
B-Y
R-Y
E
P3-40 TO P2 MOUNT P2-40
P3
2ND CONT. µ-CON FOR PIP
2ND TUNER-VIF/SIF FOR PIP
Y/C JUNGLE FOR PIP
ANT SW CONT
B-SS4500<U/C>-P3.

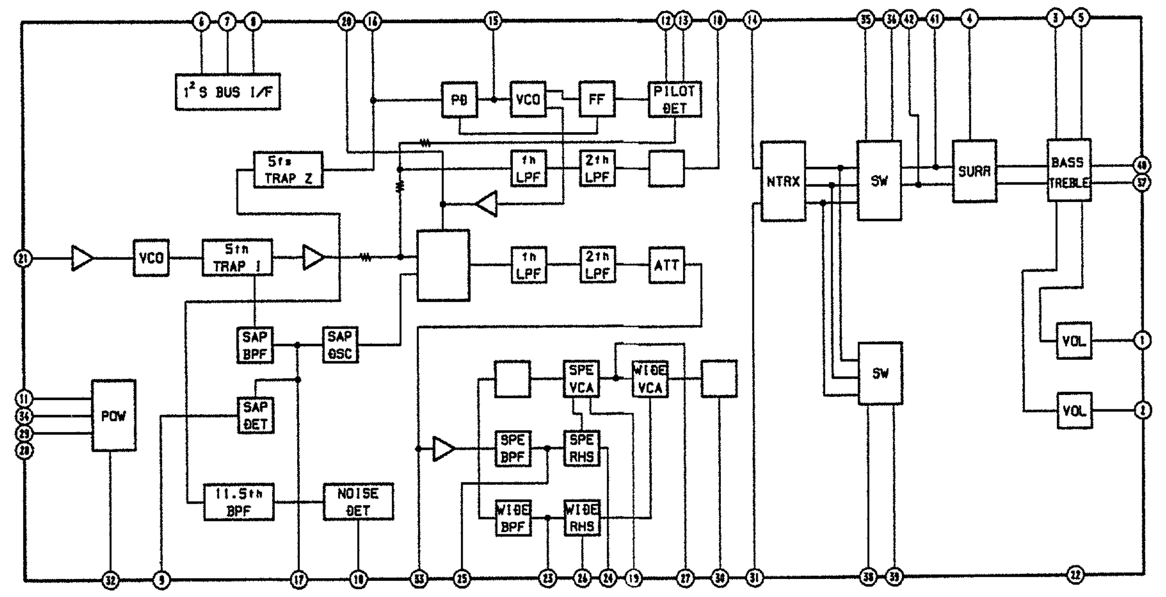
• P3 BOARD IC2002 NJM2903S


1
V+
4
3
2
5
V−
6
7
8
V+
9

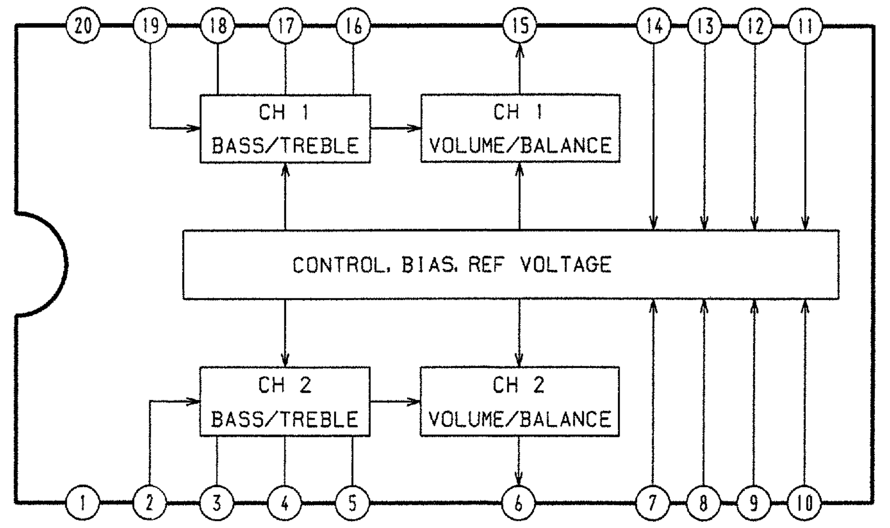
• P3 BOARD WAVEFORMS


①
4.2Vp-p (V)
②
5 Vp-p (H)
③
5 Vp-p (4MHZ)
④
4.5Vp-p (4MHZ)
⑤
6 Vp-p (≒3.58MHZ)
⑥
3 Vp-p (≒3.58MHZ)

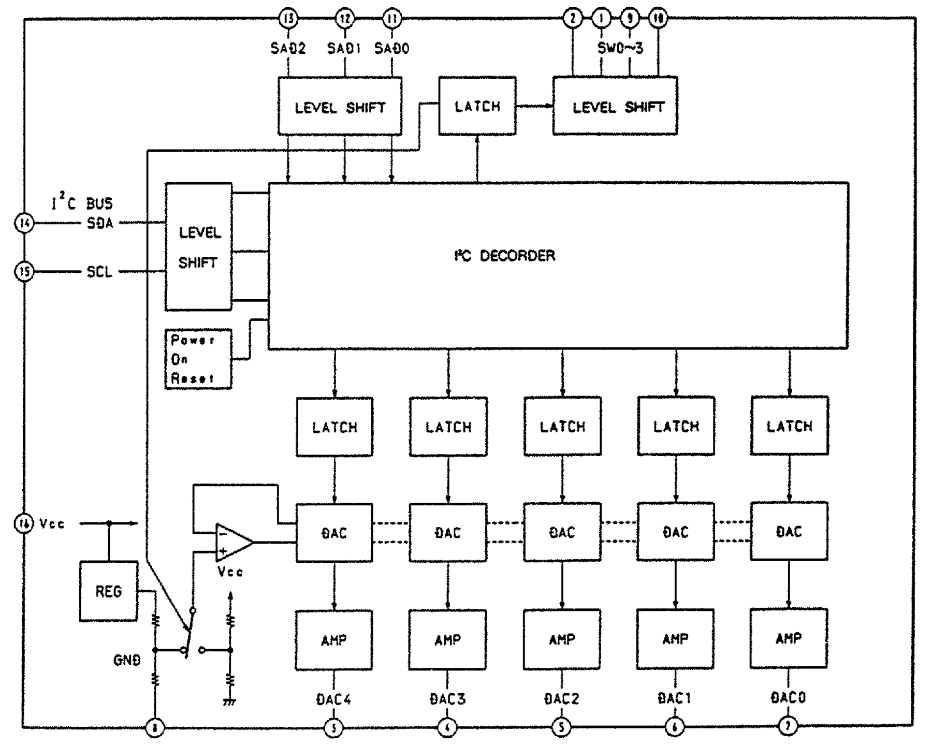
• Y2 BOARD IC406 CXA1264AS

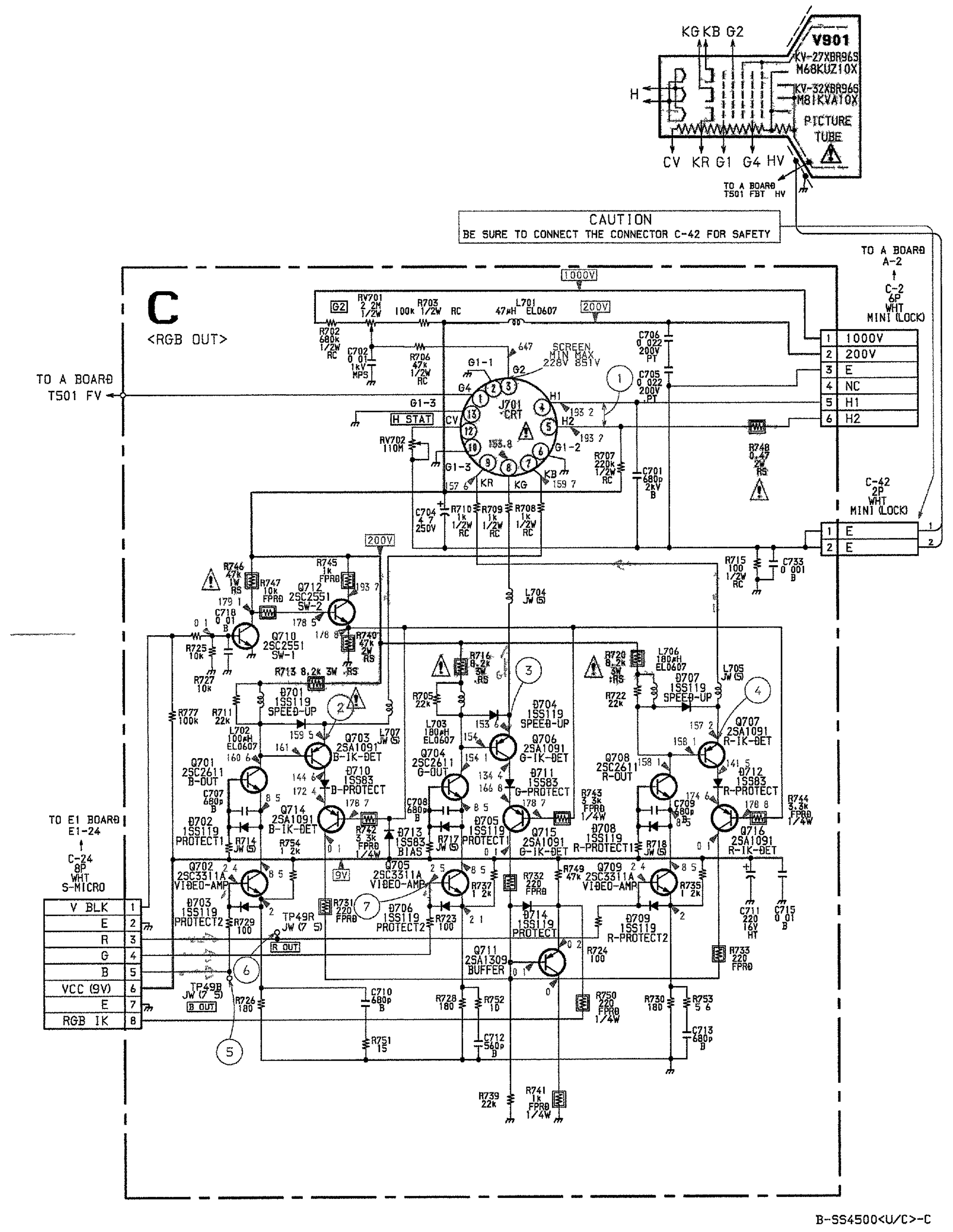

I²S BUS I/F
PD
VCO
FF
PILOT DET
5fH TRAP 2
fH LPF
2fH LPF
VCO
5fH TRAP 1
fH LPF
2fH LPF
ATT
SAP BPF
SAP OSC
SAP DET
SPE VCA
WIDE VCA
SPE BPF
RMS
11.5fH BPF
NOISE DET
WIDE BPF
RMS
MTRX
SW
SURR
BASS TREBLE
VOL
SW
VOL

• Y2 BOARD IC407 TA8184P

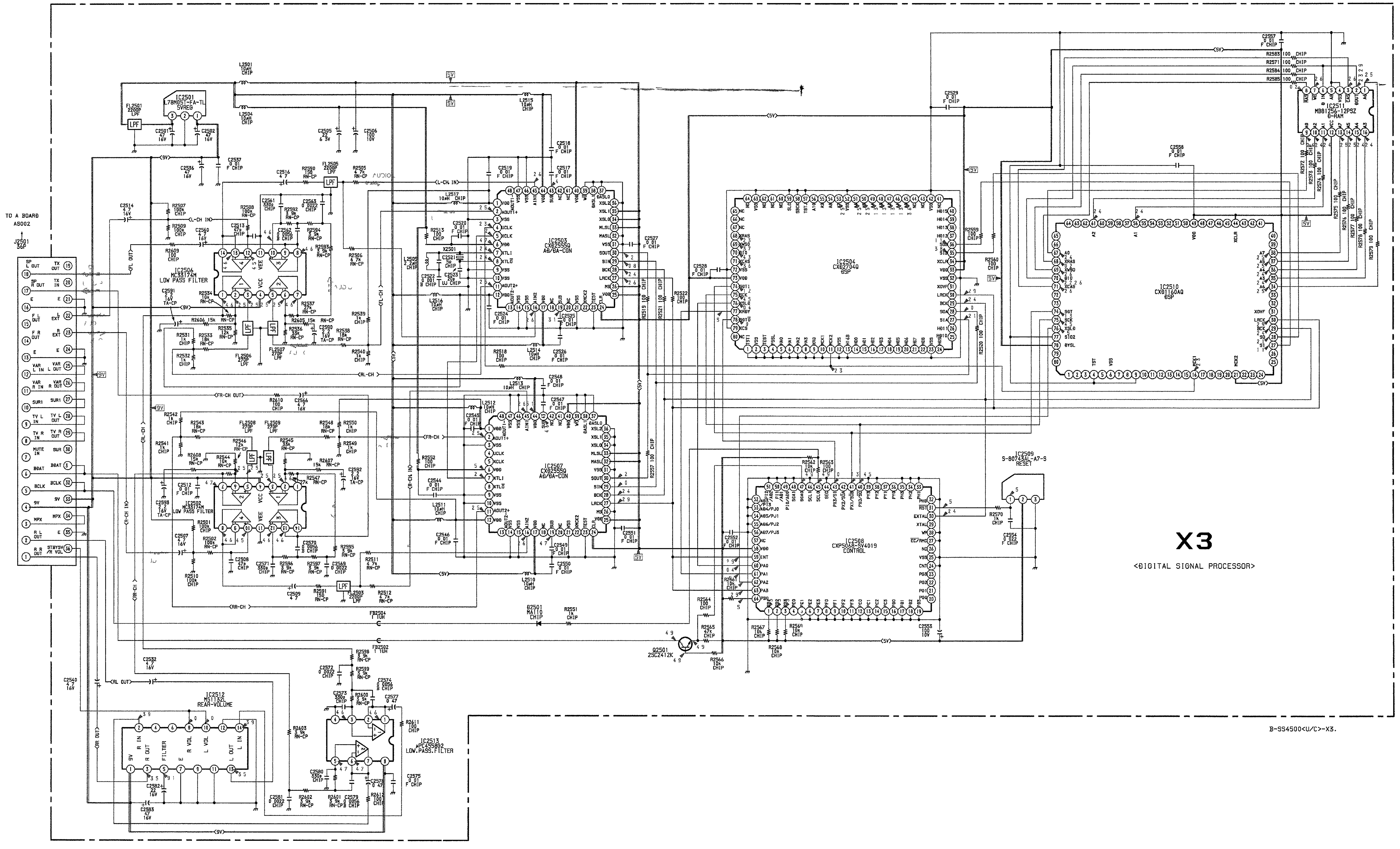

CH 1 BASS/TREBLE
CH 1 VOLUME/BALANCE
CONTROL, BIAS, REF VOLTAGE
CH 2 BASS/TREBLE
CH 2 VOLUME/BALANCE

• Y2 BOARD IC408 CXA1315P

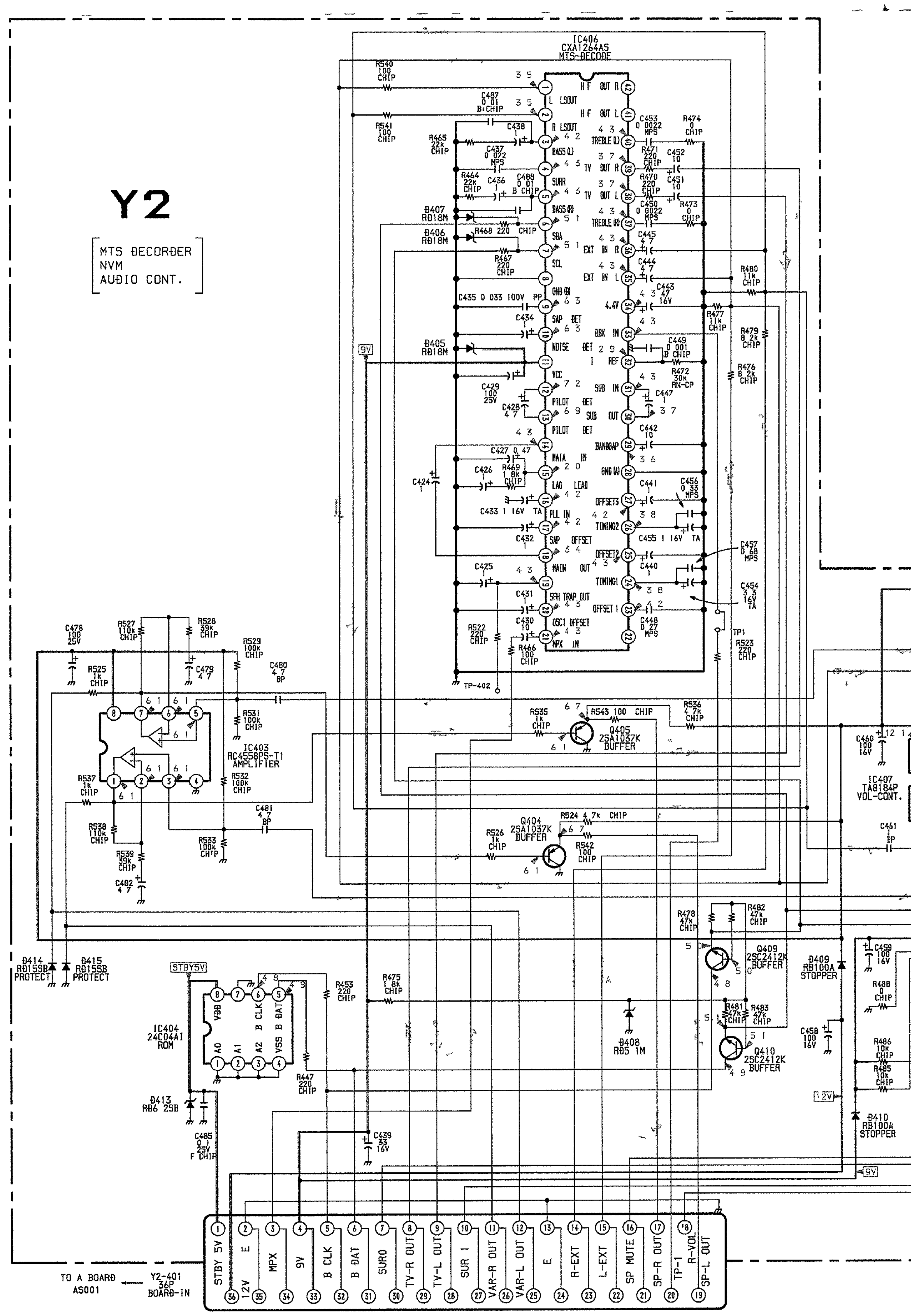

LEVEL SHIFT
LATCH
LEVEL SHIFT
I²C BUS
SDA
SCL
LEVEL SHIFT
I²C DECORDER
Power On Reset
LATCH
DAC
AMP
Vcc
REG
GND
DAC4
DAC3
DAC2
DAC1
DAC0


V901
PICTURE TUBE
CAUTION
BE SURE TO CONNECT THE CONNECTOR C-42 FOR SAFETY
C
<RGB OUT>
TO A BOARD
TO E1 BOARD

B-SS4500<U/C>-C

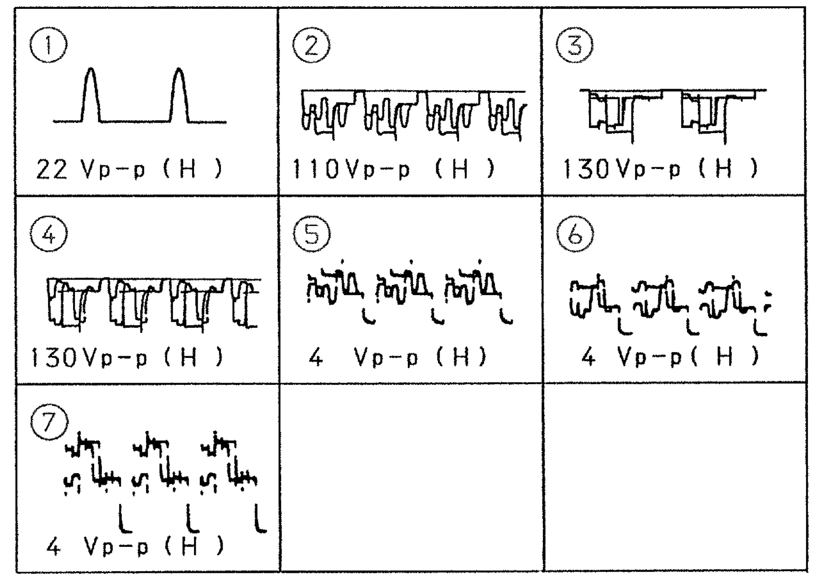

X3
<DIGITAL SIGNAL PROCESSOR>
TO A BOARD

B-SS4500<U/C>-X3.


Y2
MTS DECORDER
NVM
AUDIO CONT.
TO A BOARD

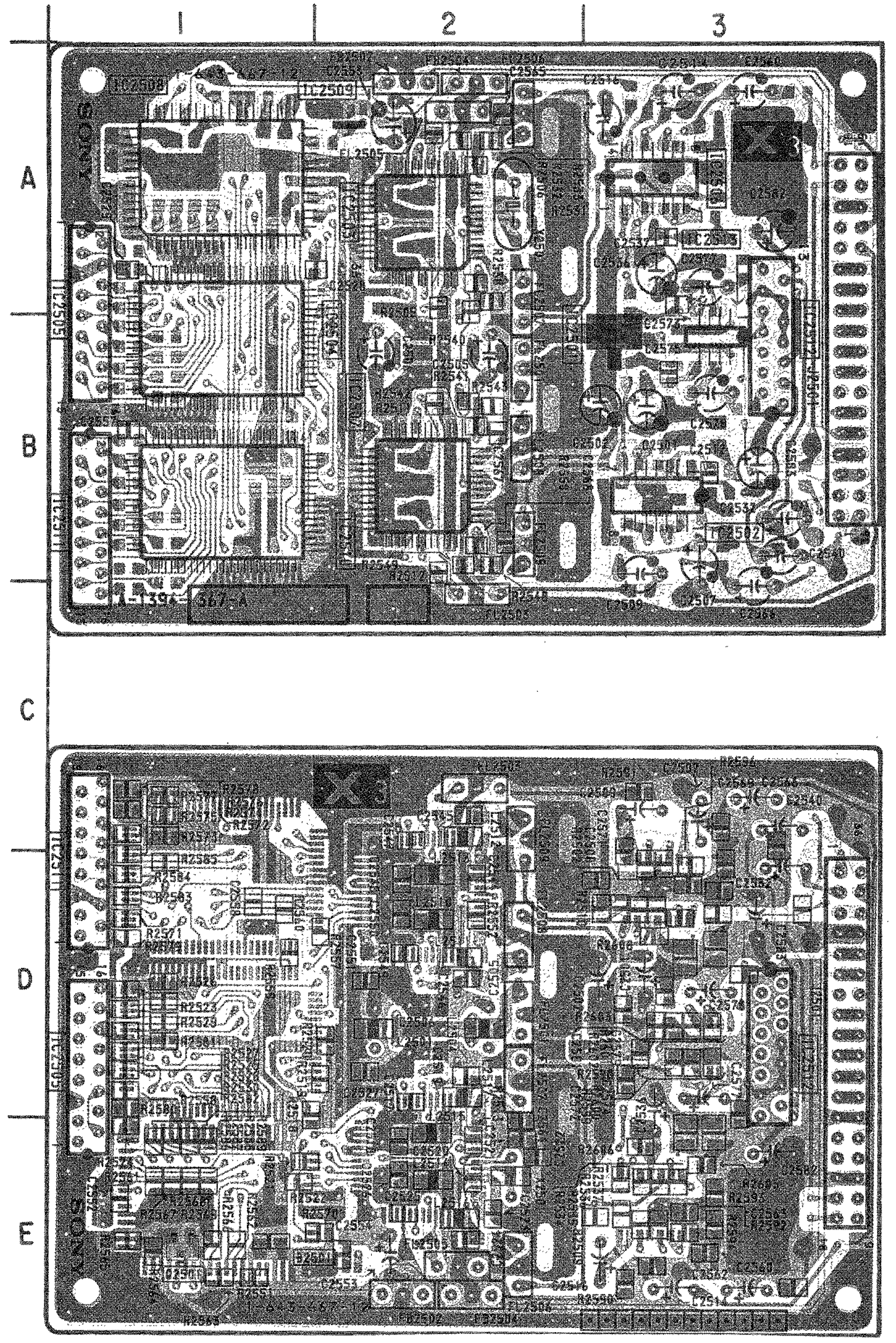
B-SS4500<U/C>-Y2.

• C BOARD WAVEFORMS



X3 [DIGITAL SIGNAL PROCESSOR] Y2 [MTS DECORDER, NVM, AUDIO CONT.] C [R G B OUT]

– X3 BOARD –



Note :
- ▒ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

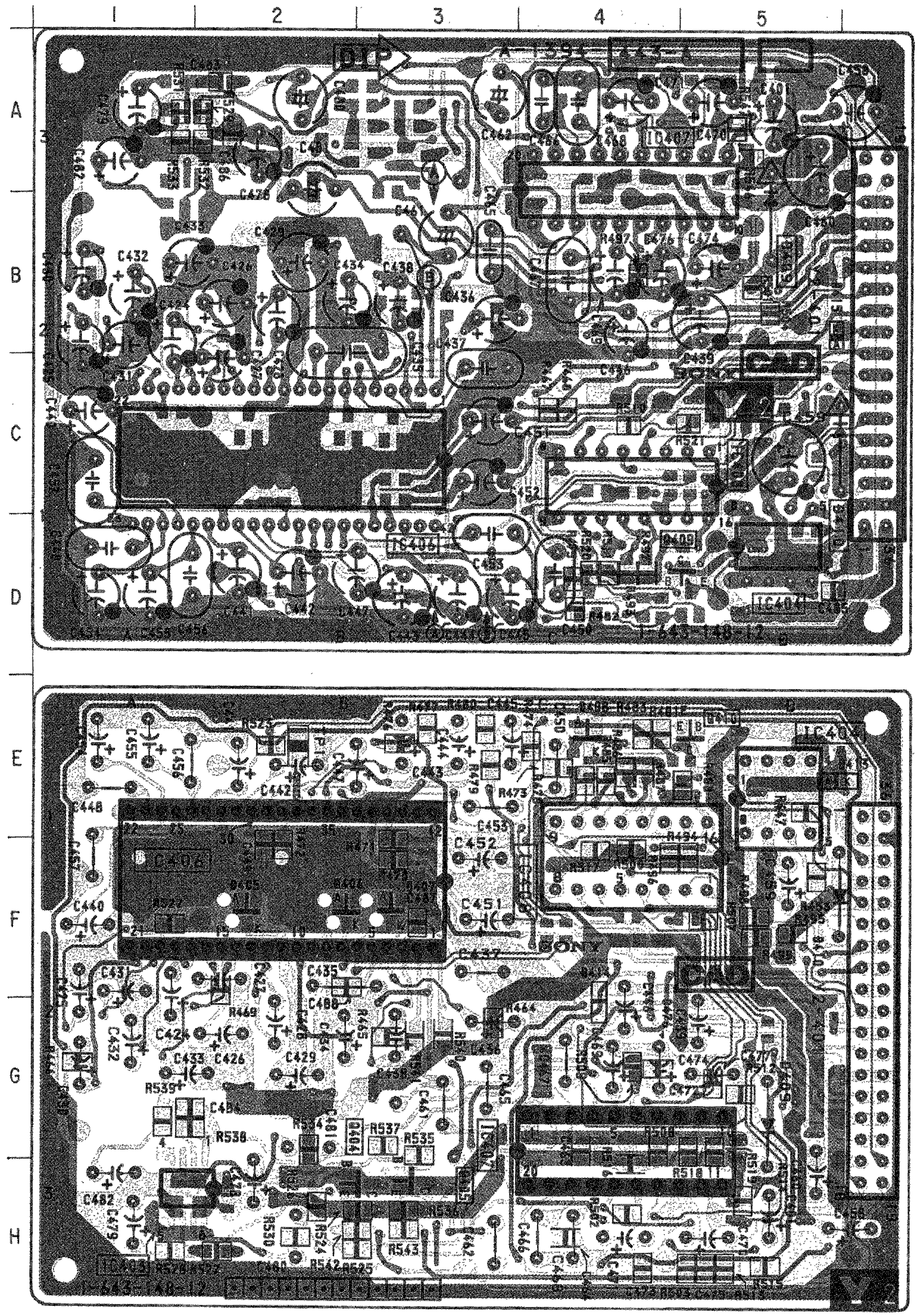
IC	
IC2501	B – 3
IC2502	B – 3
IC2503	A – 2
IC2504	B – 1
IC2506	A – 3
IC2507	B – 2
IC2508	A – 1
IC2509	A – 2
IC2510	B – 1
IC2511	B – 1, D – 1
IC2512	B – 3, D – 3
IC2513	B – 3

TRANSISTOR	
Q2501	E – 1

DIODE	
D2501	E – 1

– Y2 BOARD –

Note :
- ▒ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

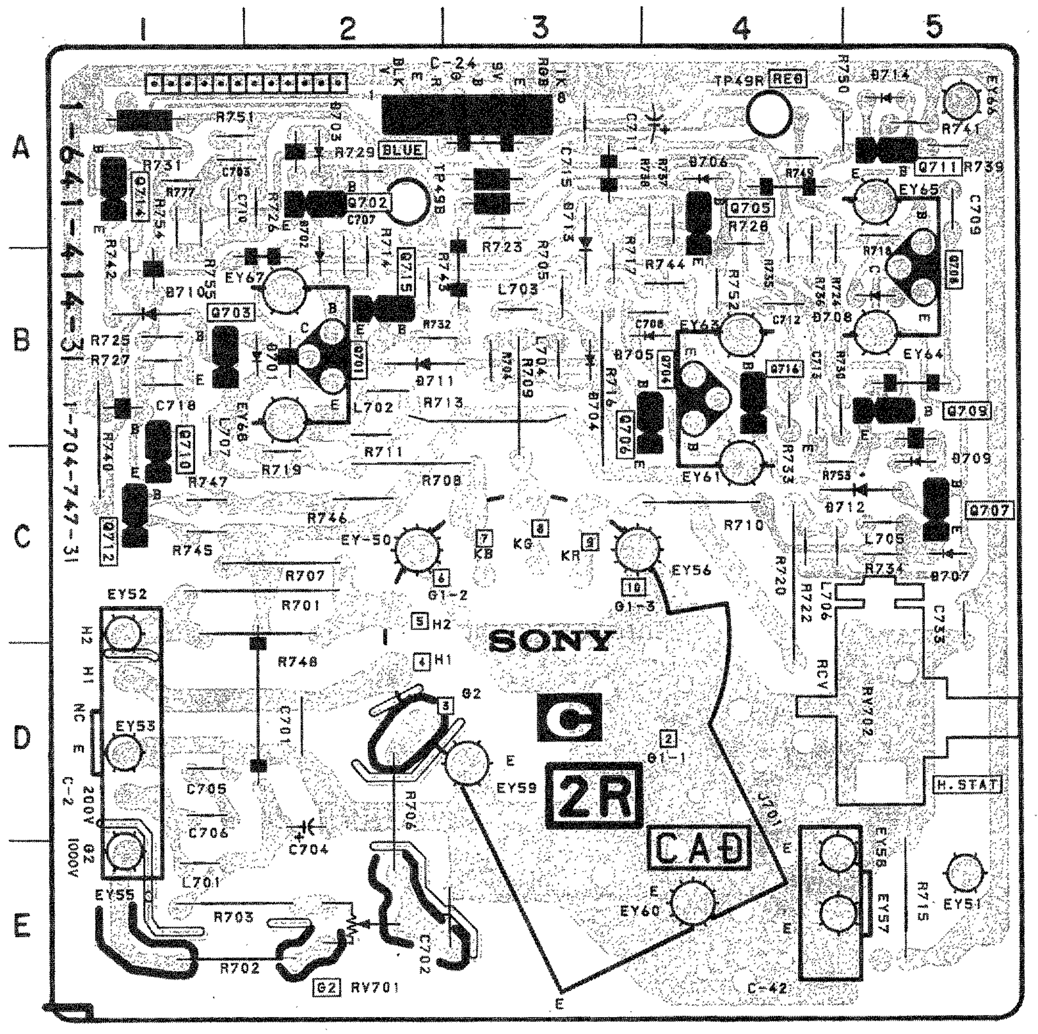


IC	
IIC403	H – 1
IC404	D – 5, E – 5
IC406	C – 2, F – 2
IC407	A – 4, G – 4
IC408	C – 4, F – 4

TRANSISTOR	
Q404	H – 3
Q405	H – 3
Q409	D – 5
Q410	E – 5

DIODE	
D405	F – 2
D406	F – 2
D407	F – 3
D408	E – 4
D409	A – 5
D410	C – 5, F – 5
D413	E – 6
D141	F – 4
D415	B – 5

– C BOARD –



Note :
- ▒ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

TRANSISTOR	
Q701	B – 2
Q702	A – 2
Q703	B – 1
Q704	B – 4
Q705	A – 4
Q706	B – 3
Q707	C – 5
Q708	B – 5
Q709	B – 5
Q710	B – 1
Q711	A – 5
Q712	C – 1
Q714	A – 1
Q715	B – 2
Q716	B – 4

DIODE	
D701	B – 2
D702	B – 2
D703	A – 2
D704	B – 3
D705	B – 3
D706	A – 4
D707	C – 5
D708	B – 5
D709	C – 5
D710	B – 1
D711	B – 2
D712	C – 5
D713	A – 3
D714	A – 5

VARIABLE RESISTOR	
RV701	E – 2
RV702	D – 5

-1
-5, E-5
-2, F-2
-4, G-4
-4, F-4

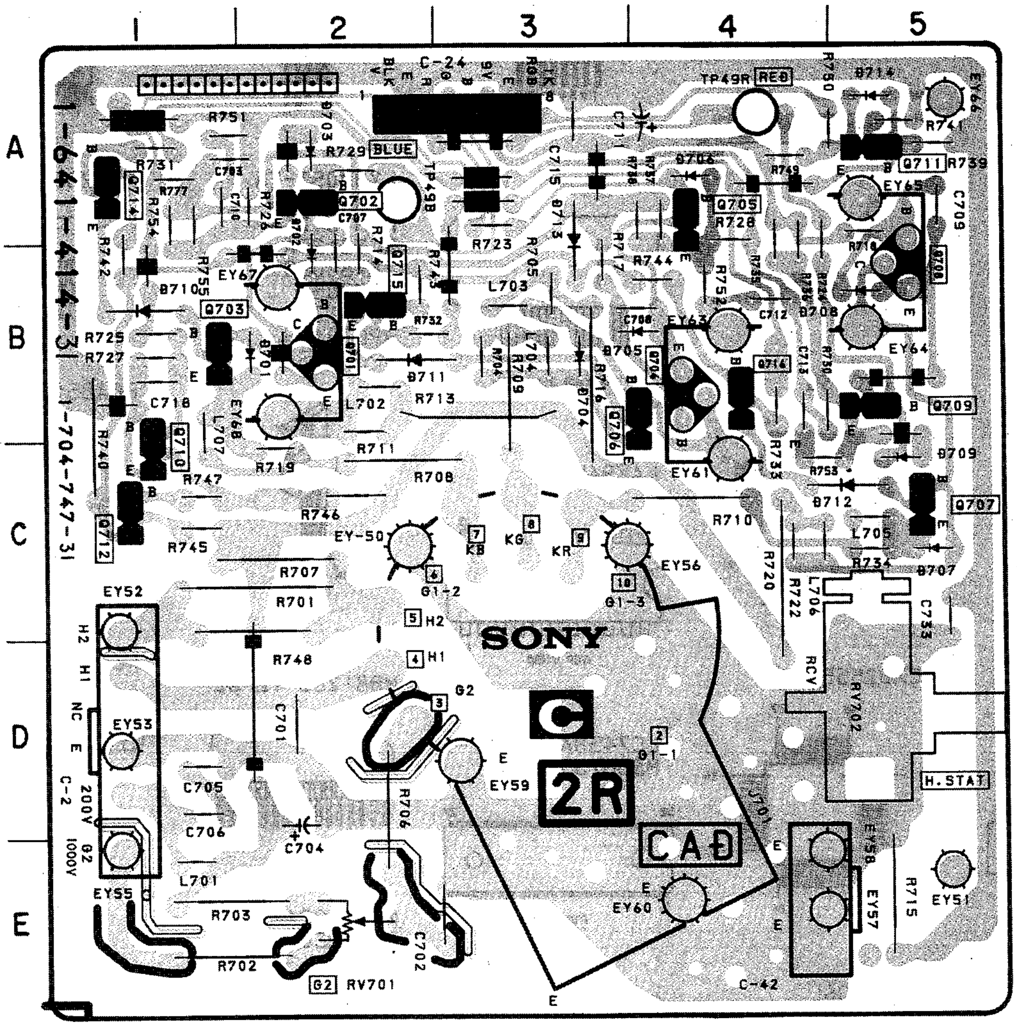
STOR

-3
-3
-5
-5

E

-2
-2
-3
-4
-5
-5, F-5
-6
-4
-5

– C BOARD –


1
2
3
4
5
A
B
C
D
E
1-641-414-31
1-704-747-31
C-24
BLK
BLUE
TP49B
TP49R
RED
SONY
C
2R
CAD
H.STAT
RV701
RV702
G2
EY52
EY53
EY55
EY56
EY-50
EY59
EY60
EY57
EY58
EY51
EY61
EY63
EY64
EY65
EY66
EY67
EY68
Q701
Q702
Q703
Q704
Q705
Q706
Q707
Q708
Q709
Q710
Q711
Q712
Q714
Q715
Q716
KB
KG
KR
G1-2
G1-3
G1-1
H1
H2
C-2
C-42
200V
1000V
L701
L702
L703
L705
L706
C701
C702
C704
C705
C706
C718
C733
R701
R702
R703
R706
R707
R708
R710
R711
R713
R715
R719
R720
R722
R723
R725
R727
R728
R729
R731
R732
R733
R734
R739
R740
R741
R742
R744
R745
R746
R747
R748
R751
R752
R754
R755
D701
D702
D703
D704
D705
D706
D707
D708
D709
D710
D711
D712
D713
D714

Note :

- ▒ : Pattern from the side which enables seeing.
- ▇ : Pattern of the rear side.

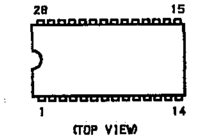
TRANSISTOR	
Q701	B-2
Q702	A-2
Q703	B-1
Q704	B-4
Q705	A-4
Q706	B-3
Q707	C-5
Q708	B-5
Q709	B-5
Q710	B-1
Q711	A-5
Q712	C-1
Q714	A-1
Q715	B-2
Q716	B-4

DIODE	
D701	B-2
D702	B-2
D703	A-2
D704	B-3
D705	B-3
D706	A-4
D707	C-5
D708	B-5
D709	C-5
D710	B-1
D711	B-2
D712	C-5
D713	A-3
D714	A-5

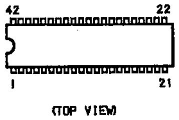
VARIABLE RESISTOR	
RV701	E-2
RV702	D-5

6-8.SEMICONDUCTORS

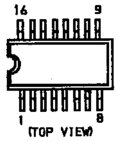
CXA1228S


28
15
1
14
(TOP VIEW)

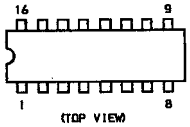
CXA1264AS


42
22
1
21
(TOP VIEW)

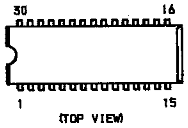
CXA1315M
MC33174M
MC74HC4053F


16
9
1
8
(TOP VIEW)

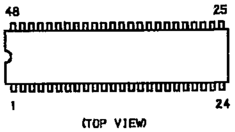
CXA1315P
CXA1526P


16
9
1
8
(TOP VIEW)

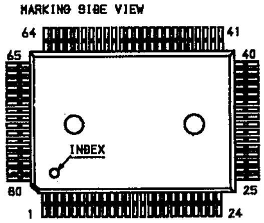
CXA1387S


30
16
1
15
(TOP VIEW)

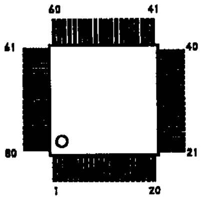
CXA1465AS
CXA1545S


48
25
1
24
(TOP VIEW)

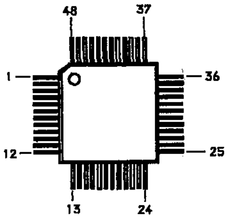
CXD1160AQ
CXD1220AQ
CXD2704Q
M37201M6-A18FP
TMC73C247-10


MARKING SIDE VIEW
64
41
65
40
INDEX
80
25
1
24

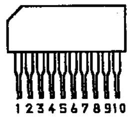
CXD2023Q


60
41
61
40
80
21
1
20

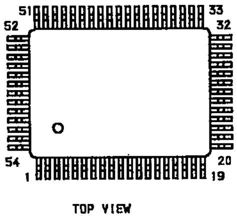
CXD2555Q


48
37
1
36
12
25
13
24

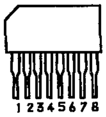
CXK1006L


1 2 3 4 5 6 7 8 9 10

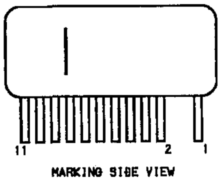
CXP5068H-205Q


51
33
52
32
54
1
20
19
TOP VIEW

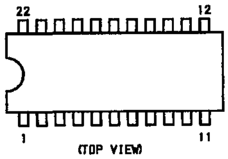
CX20061



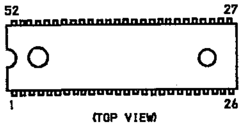
DM-44


11
2
1
MARKING SIDE VIEW

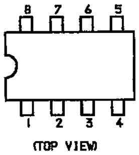
LA7945


22
12
1
11
(TOP VIEW)

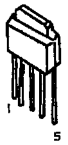
LC7458A-02
MB88733-143


52
27
1
26
(TOP VIEW)

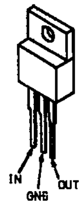
LM358P
LM393P
μPC358C
μPC393C
μPC4557C
24C04AI/P


8 7 6 5
1 2 3 4
(TOP VIEW)

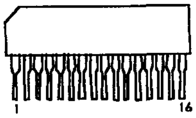
L78LR05D-MA



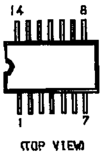
L78M05T-FA
NJM7805FA
NJM7812FA
RC7812FA
TA78L09S
TA7805S
TA7812S
μPC7812H
μPC7893AHF



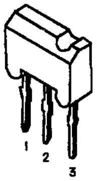
MB81256-12PSZ



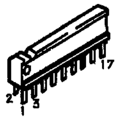
MC74HC04AF
SN74HC05ANS


14
8
1
7
(TOP VIEW)

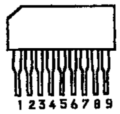
MN1280-S



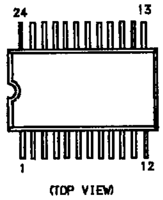
M5M4C500L-10
M51132L



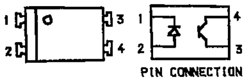
NJM2903S



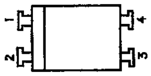
PCA8510T-012


24
13
1
12
(TOP VIEW)

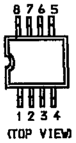
PC817-B


1
3
2
4
1
4
2
3
PIN CONNECTION

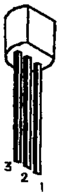
PS2501-1LB



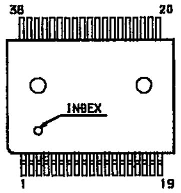
RC4558PS
μPC4558G2
μPC4570G2-E1


8 7 6 5
1 2 3 4
(TOP VIEW)

RC78L05A



SBX1483-59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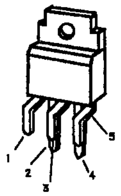
20
INDEX
1
19

SI-3090CA



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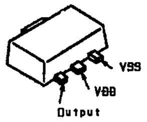
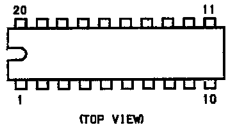
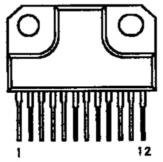

VSS
VDD
Output

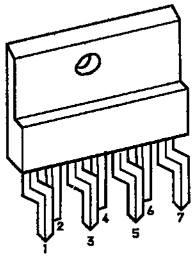
TA8184P


20
11
1
10
(TOP VIEW)

TA8216H



TDA8179S



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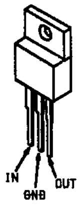

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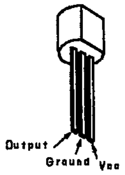
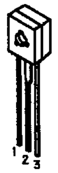

Output
Ground
Vcc

μPC78N05H



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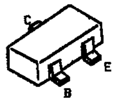
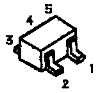
2SA1162-G
2SB709A-Q
2SC1623
2SC2412K
2SD601A-Q



FMW1
XN1501



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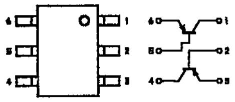
XN5501



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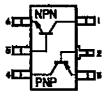
IMX3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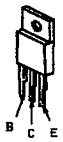
PNP
4
5
6
1
2
3

IRF540Y
IRF614



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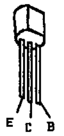
2SC2551



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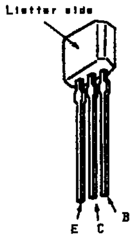
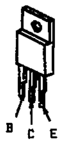
2SC2785
2SC3311A


Letter side
E
C
B

2SA1837
2SB860
2SC4793
2SD1585-LK
2SD2012



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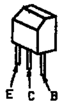
2SC3733
2SD774-34



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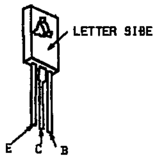
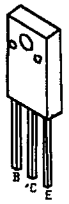
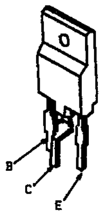
2SC2688-LK
2SC3840K


LETTER SIDE
E
C
B

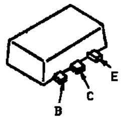
2SC4664NPR-F



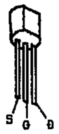
2SC4763 (LB SONY)
2SK1916-53-F87



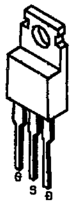
2SD874A



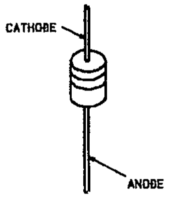
2SK108-C



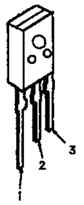
2SK1917



D1NS4
D1N20R
ERA38-006
ERA82-004
ERA83-006
ERA85-009
RB-100A
RD12ES-B2
RD13ES-B2
RD2.2ES-B2
RD30ES-B2
RD3.3ES-B2
RD33ES-B2
RD39ES-B2
RD39ES-B3
RD39ES-B4
RD5.1ES-B2
RD5.6ES-B1
RD5.6ES-B3
RD6.2ES-B2
RD6.8ES-B1
RD7.5ES-B2
RD9.1ES-B
RD9.1ES-L
RGP02-20EL-6394
1SS119


CATHODE
ANODE

D10SC4MR



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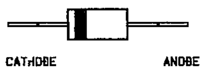
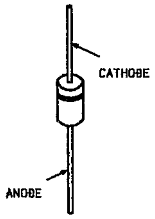

CATHODE
ANODE

D3S6M-F
ERB24-06D
RU3AM
S2L20UF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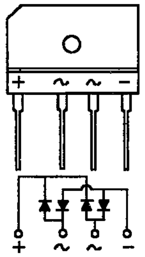
ANODE

D6SB60L



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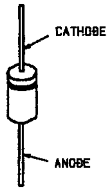
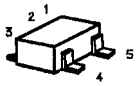
EL1Z
ERB44-06
GP08D
RGP10GPKG3
RGP15GPKG23
RU30A
1SS83


CATHODE
ANODE

FMN1



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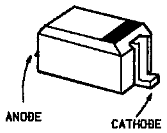
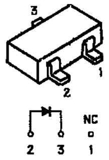
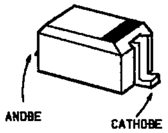

ANODE
CATHODE

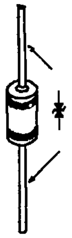
MA3130
RD18M-B1
RD3.3M-B1
RD5.1M-B3
RD6.8M-B1



RD15SB
RD5.6SB
RD6.2SB
1SS352


ANODE
CATHODE

RD9.1EW



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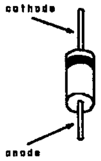
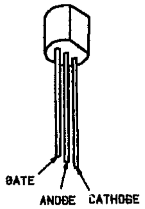
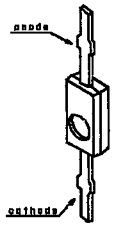

cathode
anode

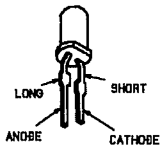
SHOR3D42


GATE
ANODE
CATHODE

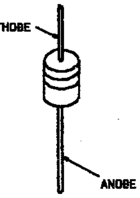
1T33


anode
cathode

TLR124


LONG
SHORT
ANODE
CATHODE

NS4
N20R
A38-006
A82-004
A83-006
A85-009
-100A
12ES-B2
13ES-B2
2.2ES-B2
30ES-B2
3.3ES-B2
33ES-B2
39ES-B2
39ES-B3
39ES-B4
5.1ES-B2
5.6ES-B1
5.6ES-B3
6.2ES-B2
6.8ES-B1
7.5ES-B2
9.1ES-B
9.1ES-L
P02-20EL-6394
S119


THODE
ANODE

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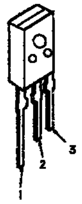
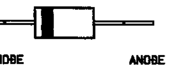
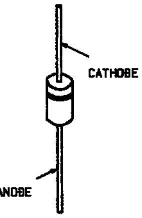


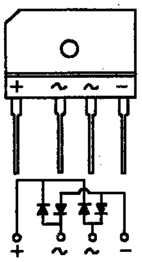
S4MF



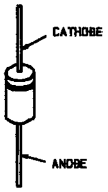
S6M-F
B24-06D
3AM
L20UF


CATHODE
NODE

D6SB60L



EGP20G
EL1Z
ERB44-06
GP08D
RGP10GPKG3
RGP15GPKG23
RU30A
1SS83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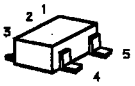
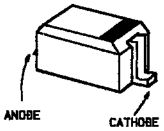
ANODE

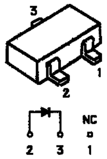
FMN1



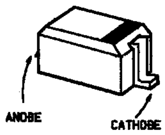
MA110


ANODE
CATHODE

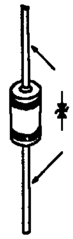
MA3130
RD18M-B1
RD3.3M-B1
RD5.1M-B3
RD6.8M-B1



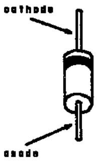
RD15SB
RD5.6SB
RD6.2SB
1SS352


ANODE
CATHODE

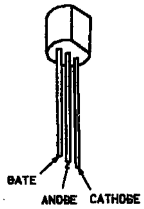
RD9.1EW



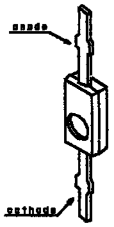
RGP02-17EL-6433


cathode
anode

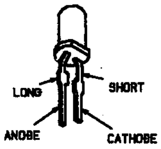
SHOR3D42


GATE
ANODE
CATHODE

1T33


anode
cathode

TLR124


LONG
SHORT
ANODE
CATHODE

SECTION 7
EXPLODED VIEWS

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

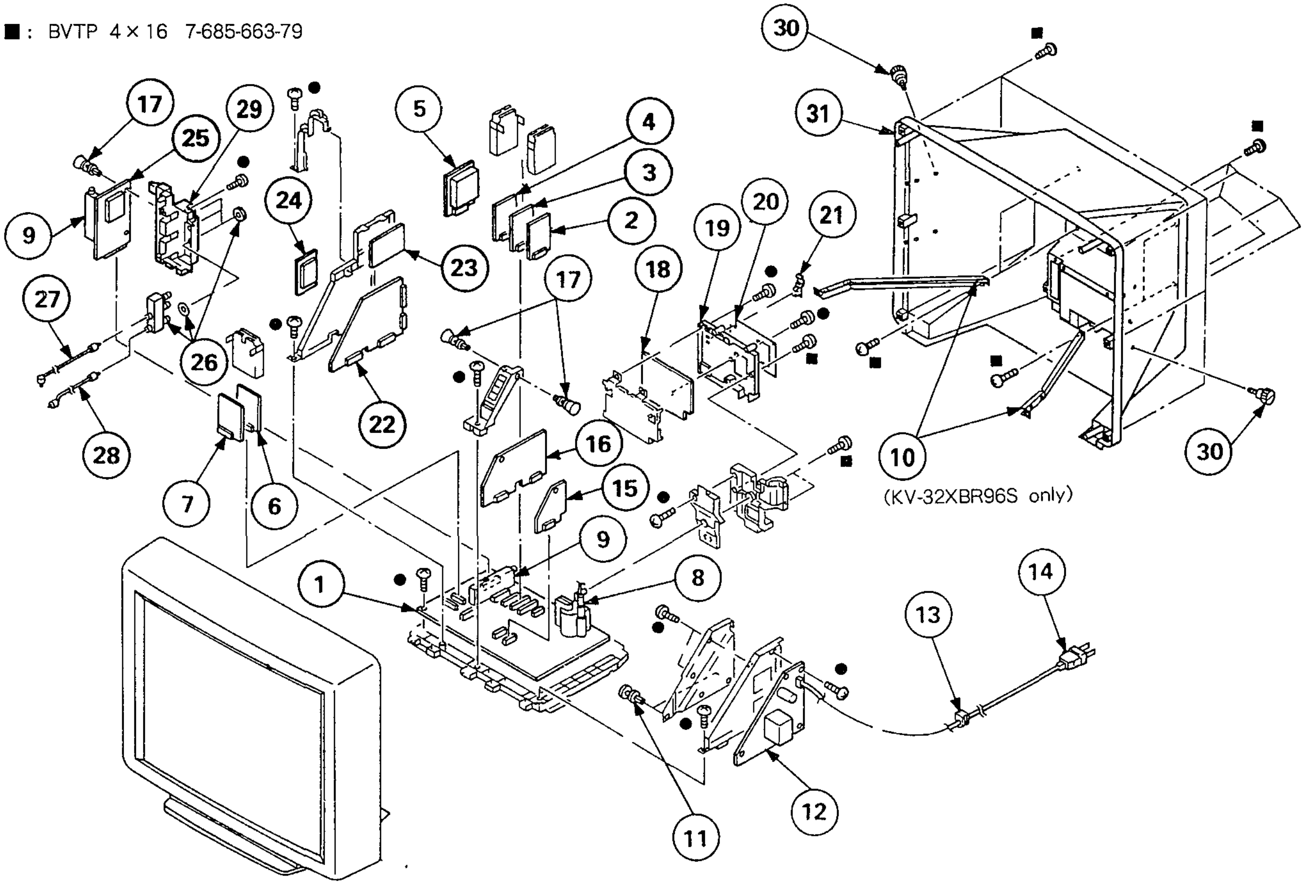
The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie

7-1. CHASSIS

●: BVTP 3 × 12 7-685-648-79

■: BVTP 4 × 16 7-685-663-79

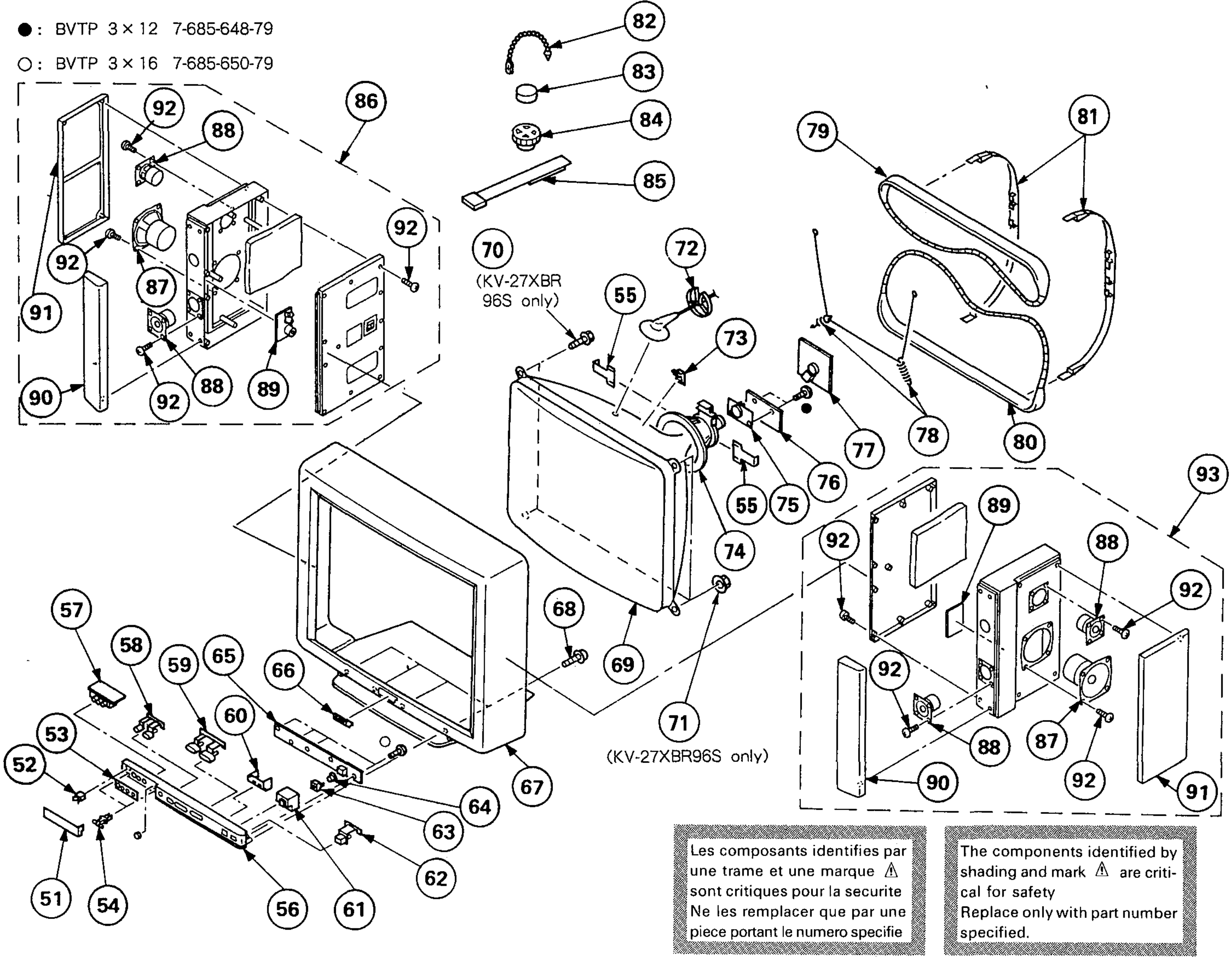


REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*A-1297-164-A	A BOARD, COMPLETE (KV-32XBR96S(U/C))	2~7
	*A-1297-165-A	A BOARD, COMPLETE (KV-27XBR96S(U/C))	2~7
2	*A-1346-133-A	E1 BOARD, COMPLETE	
3	*A-1346-136-A	E2 BOARD, COMPLETE	
4	*A-1306-435-A	M BOARD, COMPLETE	
5	*A-1195-067-A	P2 BOARD, COMPLETE	
6	*A-1394-446-A	X3 BOARD, COMPLETE	
7	*A-1394-442-A	Y2 BOARD, COMPLETE	
8	⚠1-439-524-11	TRANSFORMER ASSY, FLYBACK (NX-3000A2) (KV-27XBR96S(U/C))	
	⚠1-453-126-11	TRANSFORMER ASSY, FLYBACK (NX-3000A3) (KV-32XBR96S(U/C))	
9	⚠1-693-102-22	TUNER (BTF-XA401)	
10	*4-036-731-01	BRACKET, REAR COVER (KV-32XBR96S(U/C))	
11	4-374-303-01	RIVET, NYLON	
12	*A-1316-160-A	G BOARD, COMPLETE	
13	⚠4-334-223-03	GROMMET, AC CORD	
14	⚠1-696-002-12	CORD, POWER(WITH NOISE FILTER)	
15	*A-1347-079-A	VC BOARD, COMPLETE (KV-27XBR96S(U/C))	
	*A-1347-081-A	VC BOARD, COMPLETE (KV-32XBR96S(U/C))	
16	*A-1341-664-A	D BOARD, COMPLETE (KV-27XBR96S(U/C))	
	*A-1341-678-A	D BOARD, COMPLETE (KV-32XBR96S(U/C))	
17	*4-397-418-01	RIVET, T TYPE	
18	*A-1373-422-A	UT BOARD, COMPLETE	
19	4-035-204-11	BRACKET, UT	
20	4-035-982-11	LABEL, UT	
21	4-329-127-00	CLAMP, CORD	
22	*A-1373-421-A	U BOARD, COMPLETE	
23	*A-1394-421-A	S BOARD, COMPLETE	
24	*A-1195-065-A	P4 BOARD, COMPLETE	
25	*A-1195-069-A	P3 BOARD, COMPLETE	
26	⚠1-417-178-11	SELECTOR, ANTENNA (AS-2)	
27	*1-555-400-00	CABLE, PIN	
28	*1-557-056-31	CABLE, P-P	
29	4-035-203-01	TERMINAL BOARD, ANTENNA	
30	X-4031-013-1	SCREW ASSY, ORNAMENTAL	
31	4-035-007-01	COVER, REAR (KV-32XBR96S(U/C))	
	4-037-303-01	COVER, REAR (KV-27XBR96S(U/C))	

7-2. PICTURE TUBE

● : BVTP 3 × 12 7-685-648-79

○ : BVTP 3 × 16 7-685-650-79



Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite
Ne les remplacer que par une piece portant le numero specifie

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified.

REF.NO.	PART NO	DESCRIPTION	REMARK
51	4-035-199-01	DOOR, FRONT PANEL	
52	4-392-036-01	CATCHER, PUSH	
53	4-036-727-01	LABEL, JACK	
54	3-703-035-12	SHAFT, LID	
55	4-034-272-01	PLATE, CORRECTION, TLV	
56	4-035-057-21	PANEL, FRONT	
57	*1-643-664-11	HX2 BOARD	
58	4-035-179-01	BUTTON (A), MULTI	
59	4-035-154-01	BUTTON (B), MULTI	
60	4-035-120-01	GUIDE, LIGHT, LED	
61	4-035-119-01	FILTER (REMOTE CONTROL)	
62	4-035-153-01	BUTTON, POWER	
63	4-381-686-01	BRACKET (B), LIGHT GUIDE	
64	*4-388-603-01	GUIDE, LIGHT	
65	*1-643-663-11	HX1 BOARD	
66	3-704-179-01	EMBLEM (NO.9), SONY	
67	4-035-034-01	CABINET (WITH BEZEL) (KV-32XBR96S(U/C))	
	4-037-302-01	CABINET (WITH BEZEL) (KV-27XBR96S(U/C))	
68	4-319-520-11	SCREW, SPECIAL (+PW4X30)	
69	⚠8-733-731-05	PICTURE TEBE (M81KVA10X) (KV-32XBR96S(U/C))	
	⚠8-733-837-05	PICTURE TEBE (M68KUZ10X) (KV-27XBR96S(U/C))	
70	4-390-505-01	SCREW (7), TAPPING (KV-27XBR96S(U/C))	
71	4-387-204-01	NUT, SPECIAL, PICTURE TUBE (KV-32XBR96S(U/C))	
72	*3-704-372-01	HOLDER, HV CABLE	
73	3-704-495-01	SPACER, DY	

REF.NO.	PART NO.	DESCRIPTION	REMARK
74	⚠1-451-393-11	DEFLECTION YOKE (Y34EXA) (KV-32XBR96S(U/C))	
	⚠1-451-394-11	DEFLECTION YOKE (Y29EXA) (KV-27XBR96S(U/C))	
75	⚠1-452-616-13	NECK ASSY, PICTURE TUBE (NA323)	
76	*A-1342-220-A	V BOARD, COMPLETE	
77	*A-1331-271-A	C BOARD, COMPLETE	
78	4-036-329-01	SPRING (B), TENSION	
79	⚠1-406-586-11	COIL, DEMAGNETIZATION (KV-32XBR96S(U/C))	
	⚠1-406-588-11	COIL, DEMAGNETIZATION (KV-27XBR96S(U/C))	
80	⚠1-406-587-11	COIL, DEMAGNETIZATION (KV-32XBR96S(U/C))	
	⚠1-406-589-11	COIL, DEMAGNETIZATION (KV-27XBR96S(U/C))	
81	4-039-644-01	HOLDER, DGC (KV-32XBR96S(U/C))	
	4-039-643-02	HOLDER, DGC (KV-27XBR96S(U/C))	
82	4-308-870-00	CLIP, LEAD WIRE	
83	1-452-032-00	MAGNET,DISK; 10MMϕ	
84	1-452-094-00	MAGNET, ROTATABLE DISK; 15MMϕ	
85	X-4306-312-0	PERMALLOY ASSY, CONVERGENCE	
86	1-504-181-11	SPEAKER SYSTEM (13CM)	87~92
87	9-903-495-01	WOOFER UNIT	
88	9-903-496-01	TWEETER UNIT	
89	9-903-497-01	NETWORK	
90	9-903-498-01	NET (SMALL)	
91	9-903-499-01	NET (LARGE)	
92	9-903-500-01	SCREW	
93	1-504-182-11	SPEAKER SYSTEM (13CM)	87~92

SECTION 8
ELECTRICAL PARTS LIST

P4

NOTE:

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite
Ne les remplacer que par une piece portant le numero specifie

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

CAPACITORS
- MF : μF, PF : μμF

COILS
- MMH : mH, UH : μH

- The components identified by ☒ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation Should replacement be required, replace only with the value originally used

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1195-065-A	P4 BOARD, COMPLETE ******************			
		<CAPACITOR>			
C1201	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1202	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C1203	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C1204	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C1205	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
C1206	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C1207	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1208	1-163-237-11	CERAMIC CHIP	27PF	5%	50V
C1210	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C1211	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1213	1-126-154-11	ELECT	47MF	20%	6.3V
C1214	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1215	1-126-154-11	ELECT	47MF	20%	6.3V
C1216	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1217	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1218	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1219	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1220	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1221	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1222	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1223	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1224	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1225	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1226	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1227	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1228	1-126-154-11	ELECT	47MF	20%	6.3V
C1229	1-126-157-11	ELECT	10MF	20%	6.3V
C1230	1-126-157-11	ELECT	10MF	20%	6.3V
C1231	1-126-157-11	ELECT	10MF	20%	6.3V
C1232	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1233	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1234	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1235	1-124-257-00	ELECT	2.2MF	20%	50V
C1237	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1238	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1239	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1240	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C1241	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C1242	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1243	1-126-177-11	ELECT	100MF	20%	6.3V
C1245	1-126-157-11	ELECT	10MF	20%	6.3V
C1246	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1249	1-126-157-11	ELECT	10MF	20%	6.3V
C1250	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1251	1 164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1252	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1253	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1254	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1255	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1256	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
		<CONNECTOR>			
P4-32	1-564-522-11	PLUG, CONNECTOR 7P			
		<FILTER>			
FL1201	1-239-550-11	FILTER, LOW PASS			
FL1202	1-239-550-11	FILTER, LOW PASS			
FL1203	1-239-550-11	FILTER, LOW PASS			
		<IC>			
IC1201	8-752-352-20	IC CXD2023Q			
IC1202	8-752-062-80	IC CXA1686M			
IC1203	8-759-112-06	IC UPC78N05H			
IC1204	8-759-112-06	IC UPC78N05H			
		<COIL>			
L1201	1-408-423-00	INDUCTOR	150UH		
L1202	1-414-042-21	INDUCTOR	18UH		
L1205	1-414-042-21	INDUCTOR	18UH		
		<TRANSISTOR>			
Q1202	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1203	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1204	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1205	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1206	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1207	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1208	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1209	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1211	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1212	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1213	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1214	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1215	8-729-422-27	TRANSISTOR 2SD601A-Q			
Q1218	8-729-216-22	TRANSISTOR 2SA1162-G			
Q1220	8-729-901-01	TRANSISTOR DTC144EK			
		<RESISTOR>			
R1201	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R1202	1-216-001-00	METAL GLAZE	10	5%	1/10W
R1203	1-216-025-00	METAL GLAZE	100	5%	1/10W
R1204	1-216-630-11	METAL CHIP	130	0.50%	1/10W
R1205	1-216-639-11	METAL CHIP	330	0.50%	1/10W

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1206	1-216-620-11	METAL CHIP	51	0.50%	1/10W	
R1207	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1208	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1209	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R1210	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1211	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1212	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1213	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1214	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1215	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1216	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1217	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1218	1-216-661-11	METAL CHIP	2.7K	0.50%	1/10W	
R1219	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1220	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R1221	1-216-023-00	METAL GLAZE	82	5%	1/10W	
R1222	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R1223	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1224	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1225	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R1226	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W	
R1228	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1229	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1230	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1231	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1232	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1233	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1234	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1235	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1238	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1239	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1241	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1242	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1243	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R1244	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1245	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1246	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1247	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1248	1-216-635-11	METAL CHIP	220	0.50%	1/10W	
R1249	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1250	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R1251	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1252	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1253	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R1254	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1255	1-216-639-11	METAL CHIP	330	0.50%	1/10W	
R1256	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R1257	1-216-645-11	METAL CHIP	560	0.50%	1/10W	
R1258	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1259	1-216-644-11	METAL CHIP	510	0.50%	1/10W	
R1260	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1261	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1262	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1263	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1264	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1265	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1266	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1267	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1268	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1269	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1270	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1273	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1274	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R1276	1-216-295-00	METAL GLAZE	0	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1284	1-216-025-00	METAL GLAZE	100	5%	1/10W	

<CRYSTAL>

X1201	1-577-611-11	OSCILALTOR, CERAMIC
X1202	1-567-878-11	VIBRATOR, CRYSTAL

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*A-1195-069-A P3 BOARD, COMPLETE
****

<CAPACITOR>

C2001	1-124-910-11	ELECT	47MF	20%	50V	
C2002	1-124-910-11	ELECT	47MF	20%	50V	
C2003	1-124-119-00	ELECT	330MF	20%	16V	
C2004	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2005	1-124-261-00	ELECT	10MF	20%	50V	
C2006	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2007	1-126-157-11	ELECT	10MF	20%	16V	
C2008	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2009	1-163-157-00	FILM	0.022MF	5%	50V	
C2010	1-164-161-11	CERAMIC CHIP	0.0022MF		50V	
C2011	1-126-157-11	ELECT	10MF	20%	16V	
C2013	1-126-301-11	ELECT	1MF	20%	50V	
C2014	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C2015	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C2016	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C2017	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C2018	1-124-465-00	ELECT	0.47MF	20%	50V	
C2019	1-126-103-11	ELECT	470MF	20%	16V	
C2020	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2021	1-126-157-11	ELECT	10MF	20%	16V	
C2022	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2023	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C2024	1-124-465-00	ELECT	0.47MF	20%	50V	
C2025	1-126-157-11	ELECT	10MF	20%	16V	
C2026	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C2027	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C2028	1-163-107-00	CERAMIC CHIP	39PF	5%	50V	
C2029	1-124-477-11	ELECT	47MF	20%	16V	
C2031	1-124-910-11	ELECT	47MF	20%	50V	
C2032	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C2034	1-126-157-11	ELECT	10MF	20%	16V	
C2035	1-126-157-11	ELECT	10MF	20%	16V	
C2036	1-163-025-11	CERAMIC CHIP	0.001MF		50V	
C2037	1-124-477-11	ELECT	47MF	20%	16V	
C2038	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C2039	1-124-477-11	ELECT	47MF	20%	16V	
C2040	1-124-903-11	ELECT	1MF	20%	50V	
C2041	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C2042	1-124-902-00	ELECT	0.47MF	20%	50V	
C2043	1-136-161-00	FILM	0.047MF	5%	50V	
C2044	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2045	1-126-157-11	ELECT	10MF	20%	16V	
C2046	1-136-169-00	FILM	0.22MF	5%	50V	
C2047	1-124-463-00	ELECT	0.1MF	20%	50V	
C2048	1-163-031-11	CERAMIC CHIP	0.01MF		50V	
C2049	1-136-165-00	FILM	0.1MF	5%	50V	
C2050	1-124-902-00	ELECT	0.47MF	20%	50V	
C2051	1-126-157-11	ELECT	10MF	20%	16V	
C2052	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C2053	1-163-093-00	CERAMIC CHIP	10PF	5%	50V	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

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P3

REF.NO.	PART NO.	DESCRIPTION	REMARK
C2054	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C2055	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C2056	1-136-161-00	FILM 0.047MF 5% 50V	
C2057	1-124-477-11	ELECT 47MF 20% 16V	
C2058	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C2059	1-136-177-00	FILM 1MF 5% 50V	
C2060	1-136-153-00	FILM 0.01MF 5% 50V	
C2061	1-163-031-11	CERAMIC CHIP 0.01MF 50V	
C2062	1-163-095-00	CERAMIC CHIP 12PF 5% 50V	
C2063	1-163-101-00	CERAMIC CHIP 22PF 5% 50V	
C2064	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	
C2065	1-126-320-11	ELECT 10MF 20% 16V	
C2066	1-126-157-11	ELECT 10MF 20% 16V	
C2067	1-126-157-11	ELECT 10MF 20% 16V	
C2068	1-124-916-11	ELECT 22MF 20% 50V	
C2070	1-163-257-11	CERAMIC CHIP 180PF 5% 50V	
C2073	1-124-477-11	ELECT 47MF 20% 16V	
C2075	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	

<CONNECTOR>

P3-39	*1-564-521-11	PLUG, CONNECTOR 6P	
P3-40	*1-564-519-11	PLUG, CONNECTOR 4P	
P3-41	*1-564-519-11	PLUG, CONNECTOR 4P	

<NETWORK>

CP2001	1-236-472-11	NETWORK, RES, THICK FILM	

<TRIMMER>

CV2001	1-141-245-00	CAP, TRIMMER	

<DIODE>

D2003	8-719-106-16	DIODE RD6.8MB1	
D2004	8-719-404-46	DIODE MA110	
D2005	8-719-404-46	DIODE MA110	
D2006	8-719-105-45	DIODE RD3.3MB1	
D2007	8-719-911-19	DIODE 1SS119	

<MODULE>

FL2001	1-235-941-11	YC MODULE	

<IC>

IC2001	8-759-231-58	IC UPC7812H	
IC2002	8-759-700-48	IC NJM2903S	
IC2003	8-759-805-37	IC L78LR05D-MA	
IC2004	8-759-066-51	IC MB88733-143	
IC2005	8-759-803-25	IC CXK1006L	
IC2006	8-752-006-12	IC CX20061	
IC2007	8-752-033-32	IC CXA1228S	

<JACK>

J2001	*1-573-962-11	CONNECTOR (MALE) 50P	

<COIL>

L2002	1-410-663-31	INDUCTOR 10UH	
L2003	1-410-667-31	INDUCTOR 22UH	
L2004	1-410-663-31	INDUCTOR 10UH	

REF.NO.	PART NO.	DESCRIPTION	REMARK
L2009	1-410-663-31	INDUCTOR 10UH	
L2010	1-410-677-31	INDUCTOR 180UH	
L2011	1-410-677-31	INDUCTOR 180UH	

<TRANSISTOR>

Q2001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2002	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2003	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2004	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2005	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2006	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2007	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2008	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q2009	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2010	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2011	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2012	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2015	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2016	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2017	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2018	8-729-420-81	TRANSISTOR 2SD874A-R	
Q2019	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2020	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2021	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2022	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2023	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2024	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2025	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2026	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2027	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2028	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2029	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2030	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2031	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2032	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2033	8-729-600-12	TRANSISTOR 2SK108-C	
Q2034	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2035	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2036	8-729-422-27	TRANSISTOR 2SD601A-Q	

<RESISTOR>

R2002⚠	1-216-357-91	METAL OXIDE 4.7 5% 1W	F
R2003	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2004	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2006	1-216-689-11	METAL GLAZE 39K 5% 1/10W	
R2007	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R2008	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2009	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2010	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R2011	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R2012	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R2013	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R2014	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R2015	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2016	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R2017	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R2018	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2019	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2020	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R2021	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R2022	1-216-109-00	METAL GLAZE 330K 5% 1/10W	

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P3

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2023	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2024	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R2025	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2026	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2027	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2028	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2029	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2030	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R2031	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2032	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2033	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2034	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2035	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2036	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2037	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2038	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2039	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2040	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2041	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2042	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2043	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2044	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2045	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2046	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2047	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2048	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2049	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2050	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2051	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2052	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R2053	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2054	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2055	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2056	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2057	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2058	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2059	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2060	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2061	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2062	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2063	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2064	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2074	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2075	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2076	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2077	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R2078	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2079	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R2080	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2081	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2082	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2083	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2084	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R2085	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R2086	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W	
R2087	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2088	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2089	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2090	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2091	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2093	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2094	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R2095	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R2096	1-216-105-00	METAL GLAZE	220K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2097	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2100	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2101	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R2102	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2104	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2105	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2106	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2107	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R2108	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2109	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2110	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2111	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2112	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2113	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R2114	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R2115	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2116	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R2117	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2118	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R2119	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R2122	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2124	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2125	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R2127	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R2128	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R2129	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2130	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2131	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2132	1-216-676-11	METAL CHIP	11K	0.50%	1/10W	
R2133	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2134	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2135	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R2136	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2137	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2138	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R2139	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R2140	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2141	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	
R2142	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2143	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2144	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2145	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2146	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2147	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R2148	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2149	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2152	1-216-295-00	METAL GLAZE	0	5%	1/10W	

<VARIABLE RESISTOR>

RV2001	1-238-015-11	RES, ADJ, CARBON 4.7K
RV2002	1-238-019-11	RES, ADJ, CARBON 47K
RV2003	1-238-017-11	RES, ADJ, CARBON 22K
RV2004	1-238-017-11	RES, ADJ, CARBON 22K

<TUNER>

TU2001⚠	1-693-102-22	TUNER (BTF-XA401)

<CRYSTAL>

X2001	1-567-192-11	OSCILLATOR, CERAMIC
X2002	1-567-505-11	OSCILLATOR, CRYSTAL

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REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1297-164-A	A BOARD, COMPLETE (KV-32XBR96S(U/C)) *****************			
	*A-1297-165-A	A BOARD, COMPLETE (KV-27XBR96S(U/C)) *****************			
	4-382-854-11	SCREW (M3X10), P, SW (+)			
		<CAPACITOR>			
C201	1-126-101-11	ELECT	100MF	20%	16V
C210	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C211	1-101-006-00	CERAMIC	0.047MF		50V
C213	1-126-103-11	ELECT	470MF	20%	16V
C214	1-126-101-11	ELECT	100MF	20%	16V
C215	1-124-910-11	ELECT	47MF	20%	50V
C216	1-126-101-11	ELECT	100MF	20%	16V
C217	1-124-126-00	ELECT	47MF	20%	25V
C218	1-126-103-11	ELECT	470MF	20%	16V
C219	1-136-169-00	FILM	0.22MF	5%	50V
C220	1-124-910-11	ELECT	47MF	20%	50V
C223	1-123-875-11	ELECT	10MF	20%	50V
C224	1-124-261-00	ELECT	10MF	20%	50V
C225	1-124-120-11	ELECT	220MF	20%	16V
C226	1-124-621-11	ELECT	3300MF	20%	6.3V
C299	1-126-101-11	ELECT	100MF	20%	16V
C501	1-137-114-11	FILM	0.68MF	5%	200V
C502	1-130-471-00	FILM	0.001MF	5%	50V
C503	1-124-261-00	ELECT	10MF	20%	50V
C504	1-136-161-00	FILM	0.047MF	5%	50V
C505	1-124-790-11	ELECT	0.47MF	20%	100V
C506	1-124-480-11	ELECT	470MF	20%	25V
C507	1-130-473-00	MYLAR	0.0015MF	5%	50V
C508	1-162-114-00	CERAMIC	0.0047MF		2KV
C509	1-124-808-51	ELECT	10MF	20%	200V
C510	1-102-110-00	CERAMIC	220PF	10%	50V
C511	1-124-477-11	ELECT	47MF	20%	25V
C512	1-162-318-11	CERAMIC	0.001MF	10%	500V
C513	1-106-391-12	MYLAR	0.1MF	10%	200V
C514	1-124-477-11	ELECT	47MF	20%	25V
C515	1-162-117-00	CERAMIC	100PF	10%	500V
C517	1-124-477-11	ELECT	47MF	20%	25V
C518	1-136-161-00	FILM	0.047MF	5%	50V
C519	1-124-472-11	ELECT	470MF	20%	10V
C520 ⚠	1-161-731-51	CERAMIC	0.001MF	10%	2KV
C521 ⚠	1-137-604-21	FILM	0.022MF	2%	2KV
C522	1-162-116-00	CERAMIC	680PF	10%	2KV
C523	1-124-465-00	ELECT	0.47MF	20%	50V
C524	1-130-487-00	MYLAR	0.022MF	5%	50V
C525	1-162-116-00	CERAMIC	680PF	10%	2KV
C526 ⚠	1-137-515-91	FILM	0.056MF	3%	400V
C527	1-136-167-00	FILM	0.15MF	5%	50V
C528	1-106-359-00	MYLAR	0.0047MF	10%	200V
C529	1-136-161-00	FILM	0.047MF	5%	50V
C530	1-136-105-00	FILM	0.33MF	5%	200V
C531	1-124-634-11	ELECT	1MF	20%	250V
C532	1-124-477-11	ELECT	47MF	20%	25V
C533	1-137-516-11	FILM	1.2MF	5%	200V
C534	1-137-114-11	FILM	0.68MF	5%	200V
C535	1-124-480-11	ELECT	470MF	20%	25V
C536	1-102-228-00	CERAMIC	470PF	10%	500V
C537	1-106-343-00	MYLAR	0.001MF	10%	100V
C538	1-106-391-12	MYLAR	0.1MF	10%	200V
C539	1-123-950-00	ELECT	47MF	20%	250V
C540	1-124-480-11	ELECT	470MF	20%	25V
C541	1-102-228-00	CERAMIC	470PF	10%	500V
C542	1-106-387-00	MYLAR	0.068MF	10%	200V
C543	1-129-898-00	FILM	0.0022MF	5%	630V
C544	1-124-797-11	ELECT	0.47MF	20%	160V
C545	1-102-244-00	CERAMIC	220PF	10%	500V
C546	1-123-024-21	ELECT	33MF		160V
C547	1-130-471-00	MYLAR	0.001MF	5%	50V
C548	1-130-467-00	MYLAR	470PF	5%	50V
C549	1-124-261-00	ELECT	10MF	20%	50V
C550	1-129-702-00	FILM	0.001MF	10%	630V
C551	1-130-471-00	MYLAR	0.001MF	5%	50V
C552	1-126-176-11	ELECT	220MF	20%	10V
C553	1-124-261-00	ELECT	10MF	20%	50V
C554 ⚠	1-161-731-51	CERAMIC	0.001MF	10%	2KV
C555	1-123-947-00	ELECT	10MF	20%	250V
C557	1-124-465-00	ELECT	0.47MF	20%	50V
C559	1-129-718-00	FILM	0.022MF	5%	630V
C560	1-136-169-00	FILM	0.22MF	5%	50V
C561	1-124-261-00	ELECT	10MF	20%	50V
C562	1-124-499-11	ELECT	1MF	20%	50V
C563	1-130-491-00	MYLAR	0.047MF	5%	50V
C564	1-130-495-00	MYLAR	0.1MF	5%	50V
C565	1-130-495-00	MYLAR	0.1MF	5%	50V
C569	1-130-497-00	MYLAR	0.15MF	5%	50V
C570	1-130-471-00	MYLAR	0.001MF	5%	50V
C571	1-130-471-00	FILM	0.001MF	2%	50V
C572	1-124-907-11	ELECT	10MF	20%	50V
C573	1-130-471-00	MYLAR	0.001MF	5%	50V
C575	1-102-038-00	CERAMIC	0.001MF		500V
C576	1-106-355-12	MYLAR	0.0033MF	10%	200V
C1401	1-124-910-11	ELECT	47MF	20%	50V
C1402	1-126-157-11	ELECT	10MF	20%	16V
C1403	1-126-157-11	ELECT	10MF	20%	16V
C1404	1-126-157-11	ELECT	10MF	20%	16V
C1405	1-124-910-11	ELECT	47MF	20%	50V
C1406	1-124-910-11	ELECT	47MF	20%	50V
C1407	1-124-607-11	ELECT	2200MF	20%	50V
C1408	1-136-165-00	FILM	0.1MF	5%	50V
C1409	1-136-165-00	FILM	0.1MF	5%	50V
C1415	1-124-910-11	ELECT	47MF	20%	50V
C1416	1-126-157-11	ELECT	10MF	20%	16V
C1417	1-126-157-11	ELECT	10MF	20%	16V
C1418	1-124-910-11	ELECT	47MF	20%	50V
C1419	1-124-910-11	ELECT	47MF	20%	50V
C1420	1-136-165-00	FILM	0.1MF	5%	50V
C1421	1-124-607-11	ELECT	2200MF	20%	50V
C1422	1-136-165-00	FILM	0.1MF	5%	50V
C1423	1-124-922-11	ELECT	1000MF	20%	50V
C1424	1-124-607-11	ELECT	2200MF	20%	50V
C1425	1-124-607-11	ELECT	2200MF	20%	50V
C1426	1-126-157-11	ELECT	10MF	20%	16V
C1430	1-124-916-11	ELECT	22MF	20%	50V
C1435	1-124-916-11	ELECT	22MF	20%	50V
C1437	1-130-499-00	MYLAR	0.22MF	5%	50V
C1501	1-124-916-11	ELECT	22MF	20%	50V
C1502	1-126-301-11	ELECT	1MF	20%	50V
C1503	1-102-114-00	CERAMIC	470PF	10%	50V
C1504	1-124-480-11	ELECT	470MF	20%	25V
C1505	1-124-911-11	ELECT	220MF	20%	50V
C1506	1-136-171-00	FILM	0.33MF	5%	50V
C1507	1-106-222-00	MYLAR	0.12MF	10%	100V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C1508	1-124-480-11	ELECT 470MF 20% 25V	
C1509	1-124-122-11	ELECT 100MF 20% 50V	
C1511	1-164-014-11	CERAMIC 5PF 0.25PF 50V	
C4001	1-124-922-11	ELECT 1000MF 20% 50V	
C4007	1-124-916-11	ELECT 22MF 20% 50V	
C4008	1-130-499-00	MYLAR 0.22MF 5% 50V	

<CONNECTOR>

A2	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
A3	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P	
A4	*1-564-510-11	PLUG, CONNECTOR 7P	
A5	*1-564-507-11	PLUG, CONNECTOR 4P	
A9	*1-564-505-11	PLUG, CONNECTOR 2P	
A11	*1-564-507-11	PLUG, CONNECTOR 4P	
A12	1-573-297-21	CONNECTOR, BOARD TO BOARD 18P	
A13	1-573-297-21	CONNECTOR, BOARD TO BOARD 18P	
A14	1-573-296-21	CONNECTOR, BOARD TO BOARD 10P	
A15	1-573-296-21	CONNECTOR, BOARD TO BOARD 10P	
A18	1-573-296-21	CONNECTOR, BOARD TO BOARD 10P	
A21	*1-508-768-00	PIN, CONNECTOR (5MM PITCH) 6P	
A37	*1-564-514-11	PLUG, CONNECTOR 11P	
A38	*1-564-505-11	PLUG, CONNECTOR 2P	
A43	*1-564-508-11	PLUG, CONNECTOR 5P	
A49	*1-564-506-11	PLUG, CONNECTOR 3P	
A100	1-573-979-21	CONNECTOR, BOARD TO BOARD 11P	
DY1	*1-580-798-11	CONNECTOR PIN (DY) 6P	
ES002	*1-573-960-11	CONNECTOR (FEMALE) 50P	

<NETWORK>

CP3001	1-236-176-11	NETWORK, RES, THICK FILM	
CP3002	1-236-176-11	NETWORK, RES, THICK FILM	
CP3003	1-236-176-11	NETWORK, RES, THICK FILM	

<DIODE>

D201	8-719-121-24	DIODE RD9.1ESL	
D202	8-719-121-24	DIODE RD9.1ESL	
D205	8-719-911-19	DIODE 1SS119	
D206	8-719-911-19	DIODE 1SS119	
D207	8-719-911-19	DIODE 1SS119	
D208	8-719-911-19	DIODE 1SS119	
D209	8-719-510-48	DIODE D1N20R	
D213	8-719-110-78	DIODE RD33ESB2	
D501	8-719-018-82	DIODE RGP02-20EL-6394	
D502	⚠ 8-719-302-44	DIODE EL1Z-V1	
D503	8-719-970-87	DIODE ERA38-06	
D504	8-719-911-19	DIODE 1SS119	
D506	8-719-109-90	DIODE RD5.6ESB3	
D508	8-719-109-88	DIODE RD5.6ESB1	
D509	8-719-110-03	DIODE RD7.5ESB2	
D510	8-719-911-19	DIODE 1SS119	
D511	8-719-300-33	DIODE RU-3AM	
D512	8-719-908-03	DIODE GP08D	
D513	8-719-908-03	DIODE GP08D	
D514	8-719-312-72	DIODE RU30A	
D515	8-719-302-43	DIODE EL1Z	
D516	8-719-979-85	DIODE EGP20G	
D517	8-719-943-06	DIODE ERB24-06D	
D518	8-719-109-93	DIODE RD6.2ESB2	
D521	8-719-911-19	DIODE 1SS119	
D522	8-719-110-72	DIODE RD30ESB2	
D524	8-719-028-72	DIODE RGP02-17EL-6433	

REF.NO.	PART NO.	DESCRIPTION	REMARK
D525	8-719-911-19	DIODE 1SS119	
D527	8-719-110-78	DIODE RD33ESB2	
D529	8-719-911-19	DIODE 1SS119	
D530	8-719-911-19	DIODE 1SS119	
D1407	8-719-911-19	DIODE 1SS119	
D1408	8-719-911-19	DIODE 1SS119	
D1409	8-719-110-90	DIODE RD39ESB4	
D1410	8-719-901-83	DIODE 1SS83	
D1411	8-719-901-83	DIODE 1SS83	
D1412	8-719-911-19	DIODE 1SS119	
D1413	8-719-911-19	DIODE 1SS119	
D1414	8-719-911-19	DIODE 1SS119	
D1503	8-719-908-03	DIODE GP08D	
D4001	8-719-911-19	DIODE 1SS119	
D4005	8-719-901-83	DIODE 1SS83	
D4006	8-719-901-83	DIODE 1SS83	

<IC>

IC201	8-749-920-58	IC SI-3090CA	
IC204	8-759-701-75	IC NJM7805FA	
IC205	8-759-144-84	IC UPC24M05HF	
IC206	8-759-231-58	IC TA7812S	
IC501	8-759-103-93	IC UPC393C	
IC502	1-809-845-11	MODULE, PROTECTOR PM-30	
IC503	8-759-103-93	IC UPC393C	
IC504	8-759-231-58	IC TA7812S	
IC1401	8-759-246-70	IC TA8216H	
IC1402	8-759-246-70	IC TA8216H	
IC1501	8-759-506-46	IC TDA8179S	

<JACK>

J201	1-507-562-00	JACK	
J202	1-507-562-00	JACK	

<COIL>

L001	1-408-409-00	INDUCTOR 10UH	
L002	1-410-476-11	INDUCTOR 33UH	
L201	1-408-408-00	INDUCTOR 8.2UH	
L205	1-408-421-00	INDUCTOR 100UH	
L208	1-410-785-31	INDUCTOR 0.22UH	
L210	1-408-408-00	INDUCTOR 8.2UH	
L501	1-459-104-00	COIL, WITH CORE	
L502	1-412-552-31	INDUCTOR 2.2MMH	
L504	1-410-071-11	INDUCTOR 10MMH	
L507	1-459-483-00	COIL (WITH CORE)	
L508	1-421-541-00	COIL, CHOKE 1000UH	
L509	1-459-104-00	COIL, WITH CORE	
L510	⚠ 1-460-197-11	COIL, FERRITE (PMC)	
L511	1-412-519-11	INDUCTOR 3.3UH	
L512	1-412-531-31	INDUCTOR 33UH	
L513	1-412-519-11	INDUCTOR 3.3UH	
L514	1-459-123-00	COIL,DUST CORE(PAC)	
L515	1-410-645-31	INDUCTOR 100UH	
L520	1-412-531-31	INDUCTOR 33UH	
L1501	1-412-531-31	INDUCTOR 33UH	
L1503	1-412-531-31	INDUCTOR 33UH	

<TRANSISTOR>

Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	

The components identified by shading and mark ⚠ are critical for safety
Replace only with part number specified

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Ne les remplacer que par une piece portant le numero specifie

- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation Should replacement be required, replace only with the value originally used.

REF.NO.	PART NO.	DESCRIPTION				REMARK
Q202	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q501	8-729-011-07	TRANSISTOR 2SC4763(LBSONY)				
Q502	8-729-140-97	TRANSISTOR 2SB734-34				
Q503	8-729-011-06	TRANSISTOR 2SC3840K				
Q504	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q505	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q506	8-729-011-00	TRANSISTOR 2SK1916-53-F87				
Q507	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q509	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q510	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q511	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q512	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q513	8-729-140-96	TRANSISTOR 2SD774-34				
Q515	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q516	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q1401	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1403	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1404	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1405	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1407	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1408	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1501	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q1502	8-729-119-78	TRANSISTOR 2SC2785-HFE				

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R201	1-249-405-11	CARBON	100	5%	1/4W	F
R202	1-249-405-11	CARBON	100	5%	1/4W	F
R210	1-249-441-11	CARBON	100K	5%	1/4W	
R211	1-249-425-11	CARBON	4.7K	5%	1/4W	
R214	1-249-377-11	CARBON	0.47	5%	1/4W	F
R219	1-249-426-11	CARBON	5.6K	5%	1/4W	
R221	1-249-409-11	CARBON	220	5%	1/4W	
R222	1-249-434-11	CARBON	27K	5%	1/4W	
R223	1-249-433-11	CARBON	22K	5%	1/4W	
R224	1-249-409-11	CARBON	220	5%	1/4W	
R226	1-249-417-11	CARBON	1K	5%	1/4W	
R230 ⚠	1-215-923-51	METAL OXIDE	10K	5%	3W	F
R231	1-249-409-11	CARBON	220	5%	1/4W	F
R232 ⚠	1-216-380-91	METAL OXIDE	8.2	5%	2W	F
R233	1-249-409-11	CARBON	220	5%	1/4W	
R234	1-249-409-11	CARBON	220	5%	1/4W	
R235	1-249-409-11	CARBON	220	5%	1/4W	
R236	1-249-409-11	CARBON	220	5%	1/4W	
R237	1-249-409-11	CARBON	220	5%	1/4W	
R238	1-249-409-11	CARBON	220	5%	1/4W	
R239	1-249-409-11	CARBON	220	5%	1/4W	
R240	1-249-482-11	CARBON	4.7	5%	1/2W	F
R501	1-249-431-11	CARBON	15K	5%	1/4W	
R502	1-249-431-11	CARBON	15K	5%	1/4W	
R504 ⚠	1-215-869-91	METAL OXIDE	1K	5%	1W	F
R505	1-215-449-00	METAL	15K	1%	1/4W	
R506	1-249-423-11	CARBON	3.3K	5%	1/4W	
R507	1-249-411-11	CARBON	330	5%	1/4W	
R508	1-249-435-11	CARBON	33K	5%	1/4W	
R509	1-249-441-11	CARBON	100K	5%	1/4W	
R510	1-249-409-11	CARBON	220	5%	1/4W	F
R511	1-249-398-11	CARBON	27	5%	1/4W	F
R512	1-249-423-11	CARBON	3.3K	5%	1/4W	
R513	1-249-425-11	CARBON	4.7K	5%	1/4W	
R514	1-249-438-11	CARBON	56K	5%	1/4W	
R515	1-249-433-11	CARBON	22K	5%	1/4W	
R516	1-249-419-11	CARBON	1.5K	5%	1/4W	
R517 ⚠	1-216-361-91	METAL OXIDE	0.22	5%	2W	F
R518	1-249-437-11	CARBON	47K	5%	1/4W	
R519	1-247-755-11	CARBON	1.8K	5%	1/2W	F
R520	1-249-441-11	CARBON	100K	5%	1/4W	
R521 ⚠	1-216-481-91	METAL OXIDE	1.2K	5%	3W	F
R522 ⚠	1-215-917-51	METAL OXIDE	1K	5%	3W	F
R523	1-249-425-11	CARBON	4.7K	5%	1/4W	
R524	1-215-445-00	METAL	10K	1%	1/4W	
R526	1-249-401-11	CARBON	47	5%	1/4W	
R527	1-249-417-11	CARBON	1K	5%	1/4W	
R528	1-247-903-00	CARBON	1M	5%	1/4W	
R529	1-249-429-11	CARBON	10K	5%	1/4W	
R530	1-215-457-00	METAL	33K	1%	1/4W	
R531	1-249-432-11	CARBON	18K	5%	1/4W	
R532	1-249-437-11	CARBON	47K	5%	1/4W	
R533	1-247-887-00	CARBON	220K	5%	1/4W	
R534	1-215-472-00	METAL	130K	1%	1/4W	
R536	1-249-429-11	CARBON	10K	5%	1/4W	
R537	1-215-465-00	METAL	68K	1%	1/4W	
R538	1-247-883-00	CARBON	150K	5%	1/4W	
R539	1-249-425-11	CARBON	4.7K	5%	1/4W	
R540	1-249-437-11	CARBON	47K	5%	1/4W	
R541	1-249-397-11	CARBON	22	5%	1/4W	F
R542 ⚠	1-215-888-91	METAL OXIDE	220	5%	2W	F
R543	1-249-411-11	CARBON	330	5%	1/4W	
R544	1-249-441-11	CARBON	100K	5%	1/4W	
R546	1-215-441-00	METAL	6.8K	1%	1/4W	
R547	1-249-441-11	CARBON	100K	5%	1/4W	
R548 ⚠	1-215-889-91	METAL OXIDE	330	5%	2W	F
R549 ⚠	1-215-881-91	METAL OXIDE	15	5%	2W	F
R550 ⚠	1-215-909-51	METAL OXIDE	47	5%	3W	F
R551	1-247-743-11	CARBON	220	5%	1/2W	F
R552	1-249-389-11	CARBON	4.7	5%	1/4W	F
R553	1-249-377-11	CARBON	0.47	5%	1/4W	F
R554	1-249-377-11	CARBON	0.47	5%	1/4W	F
R555	1-202-826-00	SOLID	4.7K	20%	1/2W	
R556 ⚠	1-216-459-91	METAL OXIDE	2.7K	5%	2W	F
R558	1-259-882-11	CARBON	3.3M	5%	1/4W	
R559 ⚠	1-216-439-91	METAL OXIDE	12K	5%	1W	F
R560	1-247-901-11	CARBON	820K	5%	1/4W	
R561	1-249-410-11	CARBON	270	5%	1/4W	
R562	1-215-450-00	METAL	16K	1%	1/4W	
R564	1-215-475-00	METAL	180K	1%	1/4W	
⊠R565 ⚠		CARBON			1/4W	
⊠R566 ⚠		CARBON			1/4W	
R567	1-249-425-11	CARBON	4.7K	5%	1/4W	
R568	1-249-425-11	CARBON	4.7K	5%	1/4W	
R569	1-249-417-11	CARBON	1K	5%	1/4W	
R570	1-249-402-11	CARBON	56	5%	1/4W	
R572	1-249-393-11	CARBON	10	5%	1/4W	F
R573	1-249-393-11	CARBON	10	5%	1/4W	F
R574 ⚠	1-215-882-91	METAL OXIDE	22	5%	2W	F
R575 ⚠	1-216-459-91	METAL OXIDE	2.7K	5%	2W	F
R576	1-249-417-11	CARBON	1K	5%	1/4W	F
R577 ⚠	1-215-887-91	METAL OXIDE	150	5%	2W	F
R578 ⚠	1-216-449-91	METAL OXIDE	56	5%	2W	F
R579	1-249-441-11	CARBON	100K	5%	1/4W	
R580	1-249-441-11	CARBON	100K	5%	1/4W	
R583	1-249-441-11	CARBON	100K	5%	1/4W	
R584	1-215-463-00	METAL	56K	1%	1/4W	
R587	1-249-441-11	CARBON	100K	5%	1/4W	
R588	1-249-415-11	CARBON	680	5%	1/4W	
R589	1-249-437-11	CARBON	47K	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R590	1-249-431-11	CARBON	15K	5%	1/4W	
R591	1-247-887-00	CARBON	220K	5%	1/4W	
R592	1-249-429-11	CARBON	10K	5%	1/4W	
R593 ⚠	1-215-878-91	METAL OXIDE	33K	5%	1W	F
R594	1-247-903-00	CARBON	1M	5%	1/4W	
R595	1-249-440-11	CARBON	82K	5%	1/4W	
R596	1-249-432-11	CARBON	18K	5%	1/4W	
R597	1-249-437-11	CARBON	47K	5%	1/4W	
R599	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1401	1-215-445-00	METAL	10K	1%	1/4W	
R1402	1-215-445-00	METAL	10K	1%	1/4W	
R1403	1-215-430-00	METAL	2.4K	1%	1/4W	
R1404	1-215-430-00	METAL	2.4K	1%	1/4W	
R1405	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1406	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1407	1-215-447-00	METAL	12K	1%	1/4W	
R1408	1-215-447-00	METAL	12K	1%	1/4W	
R1409	1-249-433-11	CARBON	22K	5%	1/4W	
R1410	1-249-433-11	CARBON	22K	5%	1/4W	
R1418	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1419	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1420	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1421	1-249-385-11	CARBON	2.2	5%	1/4W	F
R1423	1-247-883-00	CARBON	150K	5%	1/4W	
R1424	1-249-433-11	CARBON	22K	5%	1/4W	
R1426	1-249-433-11	CARBON	22K	5%	1/4W	
R1427	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1428	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1429	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1431	1-249-405-11	CARBON	100	5%	1/4W	
R1433	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1434	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1439	1-247-883-00	CARBON	150K	5%	1/4W	
R1501	1-215-449-00	METAL	15K	1%	1/4W	
R1502	1-215-433-00	METAL	3.3K	1%	1/4W	
R1503	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1505	1-249-433-11	CARBON	22K	5%	1/4W	
R1506 ⚠	1-218-642-91	METAL OXIDE	100K	5%	1W	F
R1507	1-249-436-11	CARBON	39K	5%	1/4W	
R1508	1-215-453-00	METAL	22K	1%	1/4W	
R1509	1-215-455-00	METAL	27K	1%	1/4W	
R1510	1-249-383-11	CARBON	1.5	5%	1/4W	F
R1511 ⚠	1-215-888-91	METAL OXIDE	220	5%	2W	F
R1512 ⚠	1-216-369-91	METAL OXIDE	1	5%	2W	F
R1513	1-249-436-11	CARBON	39K	5%	1/4W	
R4001	1-249-421-11	CARBON	2.2K	5%	1/4W	
R4002	1-249-385-11	CARBON	2.2	5%	1/4W	F
R4003 ⚠	1-216-361-91	METAL OXIDE	0.22	5%	2W	F
R4004 ⚠	1-216-374-91	METAL OXIDE	2.7	5%	2W	F
R4006 ⚠	1-216-396-91	METAL OXIDE	3.9	5%	3W	F

<SPARK GAP>

REF.NO.	PART NO.	DESCRIPTION
SG501	1-519-422-11	GAP, SPARK

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION
T501 ⚠	1-439-524-11	TRANSFORMER ASSY, FLYBACK (NX-3000A2) (KV-27XBR96S(U/C))
⚠	1-453-126-11	TRANSFORMER ASSY, FLYBACK (NX-3000A3) (KV-32XBR96S(U/C))
T502 ⚠	1-460-199-12	TRANSFORMER (HLT)
T503	1-437-195-11	TRANSFORMER, HORIZONTAL DRIVE
T504	1-424-584-11	TRANSFORMER, DYNAMIC FOCUS

<THERMISTOR>

REF.NO.	PART NO.	DESCRIPTION
THP150	1-807-925-11	THERMISTOR

<TUNER>

REF.NO.	PART NO.	DESCRIPTION
TU101 ⚠	1-693-102-22	TUNER (BTF-XA401)

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*A-1306-435-A M BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C001	1-124-261-00	ELECT	10MF	20%	50V	
C002	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C003	1-136-161-00	FILM	0.047MF	5%	50V	
C004	1-126-301-11	ELECT	1MF	20%	50V	
C005	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C014	1-124-910-11	ELECT	47MF	20%	50V	
C015	1-124-464-11	ELECT	0.22MF	20%	50V	
C017	1-124-589-11	ELECT	47MF	20%	16V	
C018	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	
C019	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V	
C020	1-163-241-11	CERAMIC CHIP	39PF	5%	50V	
C021	1-163-239-11	CERAMIC CHIP	33PF	5%	50V	
C029	1-163-115-00	CERAMIC CHIP	82PF	5%	50V	
C030	1-163-115-00	CERAMIC CHIP	82PF	5%	50V	
C034	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C035	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C036	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C041	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C042	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C045	1-163-125-00	CERAMIC CHIP	220PF	5%	50V	
C047	1-124-261-00	ELECT	10MF	20%	50V	
C048	1-124-261-00	ELECT	10MF	20%	50V	
C049	1-124-261-00	ELECT	10MF	20%	50V	
C055	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V	
C064	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C065	1-124-257-00	ELECT	2.2MF	20%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
M39	*1-564-521-11	PLUG, CONNECTOR 6P
M45	*1-564-523-11	PLUG, CONNECTOR 8P
M001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D001	8-719-404-46	DIODE MA110
D002	8-719-404-46	DIODE MA110
D003	8-719-404-46	DIODE MA110
D004	8-719-404-46	DIODE MA110
D005	8-719-404-46	DIODE MA110
D006	8-719-404-46	DIODE MA110
D007	8-719-404-46	DIODE MA110
D008	8-719-404-46	DIODE MA110
D009	8-719-404-46	DIODE MA110
D010	8-719-300-57	DIODE 1T33
D011	8-719-404-46	DIODE MA110
D012	8-719-404-46	DIODE MA110
D014	8-719-404-46	DIODE MA110
D015	8-719-404-46	DIODE MA110

M

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<IC>	
IC001	8-759-169-06	IC TMC73C247-10	
IC002	8-759-403-44	IC MN1280-S	
		<COIL>	
L001	1-408-409-00	INDUCTOR 10UH	
L002	1-410-476-11	INDUCTOR 33UH	
		<TRANSISTOR>	
Q001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q002	8-729-216-22	TRANSISTOR 2SA1162-G	
Q003	8-729-216-22	TRANSISTOR 2SA1162-G	
Q004	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q005	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q006	8-729-216-22	TRANSISTOR 2SA1162-G	
Q007	8-729-216-22	TRANSISTOR 2SA1162-G	
Q008	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q009	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q010	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q011	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q012	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q013	8-729-216-22	TRANSISTOR 2SA1162-G	
Q014	8-729-422-27	TRANSISTOR 2SD601A-Q	
		<RESISTOR>	
R001	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R002	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R003	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R004	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R005	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R006	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R007	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R008	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R009	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R011	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R012	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R013	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R014	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R015	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R016	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R017	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R018	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R019	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R020	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R021	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R022	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R023	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R024	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R025	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R026	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R027	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R028	1-216-023-00	METAL GLAZE 82 5% 1/10W	
R029	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R030	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R031	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R032	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R033	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R034	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R035	1-216-033-00	METAL GLAZE 220 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R036	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R037	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R038	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R039	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R040	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R041	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R042	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R043	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R044	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R045	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R046	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R047	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R048	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R049	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R050	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R051	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R052	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R053	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R054	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R055	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R056	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R057	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R058	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R059	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R060	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R063	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R064	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R065	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R066	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R067	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R068	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R069	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R070	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R071	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R072	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R073	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R074	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R075	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R076	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R077	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R078	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R079	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R080	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R081	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R082	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R083	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R084	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R085	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R086	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R087	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R088	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R089	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R090	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R091	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R092	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R093	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R094	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R095	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R096	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R097	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R098	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R099	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R100	1-216-025-00	METAL GLAZE 100 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R101	1-216-025-00	METAL GLAZE	100	5%	1/10W
R102	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R103	1-216-033-00	METAL GLAZE	220	5%	1/10W
R104	1-216-033-00	METAL GLAZE	220	5%	1/10W

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X001	1-579-743-11	VIBRATOR, CRYSTAL

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*A-1346-133-A E1 BOARD, COMPLETE
****

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C301	1-163-010-11	CERAMIC CHIP	0.0012MF	10%	50V
C303	1-126-157-11	ELECT	10MF	20%	16V
C304	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C305	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C306	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C309	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C310	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C314	1-124-915-11	ELECT	10MF	20%	16V
C315	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C319	1-126-157-11	ELECT	10MF	20%	16V
C320	1-124-465-00	ELECT	0.47MF	20%	50V
C321	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C322	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C323	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C324	1-124-234-00	ELECT	22MF	20%	16V
C325	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C326	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C327	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C328	1-126-157-11	ELECT	10MF	20%	16V
C329	1-126-157-11	ELECT	10MF	20%	16V
C330	1-126-157-11	ELECT	10MF	20%	16V
C331	1-126-301-11	ELECT	1MF	20%	50V
C332	1-124-584-00	ELECT	100MF	20%	10V
C333	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C334	1-137-491-11	FILM CHIP	0.1MF	5%	25V
C335	1-136-169-00	FILM	0.22MF	5%	50V
C336	1-126-301-11	ELECT	1MF	20%	50V
C337	1-126-301-11	ELECT	1MF	20%	50V
C338	1-124-584-00	ELECT	100MF	20%	10V
C339	1-124-791-11	ELECT	1MF	20%	50V
C340	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C341	1-126-157-11	ELECT	10MF	20%	16V
C342	1-124-465-00	ELECT	0.47MF	20%	50V
C343	1-124-589-11	ELECT	47MF	20%	16V
C344	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C345	1-124-767-00	ELECT	2.2MF	20%	50V
C346	1-164-232-11	CERAMIC CHIP	0 01MF	10%	50V
C347	1-136-169-00	FILM	0.22MF	5%	50V
C348	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C349	1-126-301-11	ELECT	1MF	20%	50V
C350	1-126-301-11	ELECT	1MF	20%	50V
C351	1-163-002-11	CERAMIC CHIP	270PF	10%	50V
C352	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C353	1-126-163-11	ELECT	4.7MF	20%	50V
C354	1-136-169-00	FILM	0.22MF	5%	50V
C355	1-124-465-00	ELECT	0.47MF	20%	50V
C356	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C357	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C358	1-124-767-00	ELECT	2.2MF	20%	50V
C360	1-137-491-11	FILM CHIP	0.1MF	5%	25V
C361	1-126-301-11	ELECT	1MF	20%	50V
C362	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C363	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C364	1-126-301-11	ELECT	1MF	20%	50V
C365	1-164-343-11	CERAMIC CHIP	0.056MF	10%	25V
C366	1-124-257-00	ELECT	2.2MF	20%	50V
C367	1-126-157-11	ELECT	10MF	20%	16V
C368	1-124-234-00	ELECT	22MF	20%	16V
C369	1-163-001-11	CERAMIC CHIP	220PF	10%	50V
C370	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C371	1-124-126-00	ELECT	47MF	20%	16V
C372	1-124-589-11	ELECT	47MF	20%	16V
C373	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C378	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C379	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C380	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C381	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C382	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C383	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C384	1-163-095-00	CERAMIC CHIP	12PF	5%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
E1-24	1-564-523-11	PLUG, CONNECTOR 8P
E1-25	*1-564-521-11	PLUG, CONNECTOR 6P
E1-26	*1-564-522-11	PLUG, CONNECTOR 7P
E1-001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D301	8-719-404-46	DIODE MA110
D302	8-719-404-46	DIODE MA110
D303	8-719-404-46	DIODE MA110
D304	8-719-404-46	DIODE MA110
D305	8-719-404-46	DIODE MA110
D306	8-719-158-15	DIODE RD5.6SB
D307	8-719-404-46	DIODE MA110
D310	8-719-158-15	DIODE RD5.6SB
D312	8-719-404-46	DIODE MA110
D313	8-719-404-46	DIODE MA110
D314	8-719-404-46	DIODE MA110
D315	8-719-404-46	DIODE MA110
D316	8-719-404-46	DIODE MA110
D317	8-719-404-46	DIODE MA110
D318	8-719-404-46	DIODE MA110
D319	8-719-404-46	DIODE MA110
D320	8-719-404-46	DIODE MA110
D321	8-719-400-94	DIODE MA3130

<DELAY LINE>

REF.NO.	PART NO.	DESCRIPTION
DL302	1-415-817-11	DELAY LINE

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC301	8-752-058-68	IC CXA1315M
IC302	8-752-059-67	IC CXA1465AS
IC303	8-759-106-02	IC UPC4570G2

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L301	1-410 064-11	INDUCTOR	2.7MMH
L307	1-410-944-31	INDUCTOR CHIP	15UH

REF.NO.	PART NO.	DESCRIPTION	REMARK
L308	1-410-946-31	INDUCTOR CHIP 22UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q301	8-729-925-79	TRANSISTOR IMX3	
Q302	8-729-925-79	TRANSISTOR IMX3	
Q303	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q304	8-729-907-46	TRANSISTOR IMZ1	
Q305	8-729-925-79	TRANSISTOR IMX3	
Q306	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q307	8-729-903-10	TRANSISTOR FMW1	
Q309	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q310	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q311	8-729-403-27	TRANSISTOR XN4401	
Q312	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q314	8-729-403-27	TRANSISTOR XN4401	
Q315	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q316	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q317	8-729-216-22	TRANSISTOR 2SA1162-G	
Q321	8-729-925-79	TRANSISTOR IMX3	
Q322	8-729-216-22	TRANSISTOR 2SA1162-G	
Q323	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q324	8-729-216-22	TRANSISTOR 2SA1162-G	
Q325	8-729-216-22	TRANSISTOR 2SA1162-G	
Q326	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q327	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q328	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q329	8-729-925-79	TRANSISTOR IMX3	
Q330	8-729-925-79	TRANSISTOR IMX3	
Q333	8-729-925-79	TRANSISTOR IMX3	
Q334	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q335	8-729-907-46	TRANSISTOR IMZ1	
Q340	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q342	8-729-925-79	TRANSISTOR IMX3	
Q344	8-729-216-22	TRANSISTOR 2SA1162-G	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R301	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R302	1 216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R303	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R304	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R305	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R306	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R307	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R308	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R309	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R310	1-216 065-00	METAL GLAZE	4.7K	5%	1/10W	
R312	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R313	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R314	1-216-061-00	METAL GLAZE	3 3K	5%	1/10W	
R316	1-216-035-00	METAL GLAZE	270	5%	1/10W	
R317	1-216-121-00	METAL GLAZE	1M	5%	1/10W	
R320	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R325	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R326	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R331	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R332	1-216-657-11	METAL CHIP	1.8K	0.50%	1/10W	
R333	1 216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R336	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R338	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R339	1-216-047-00	MEIAL GLAZE	820	5%	1/10W	
R340	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R341	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R343	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R344	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R345	1-216-292-11	METAL GLAZE	8.2M	5%	1/8W	
R346	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R347	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R348	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R349	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R350	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R351	1-216-674-11	METAL CHIP	9.1K	0.50%	1/10W	
R352	1-216-011-00	METAL GLAZE	27	5%	1/10W	
R353	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R354	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R355	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R356	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R357	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R358	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R359	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R360	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R361	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R362	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R363	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R364	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R365	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R366	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R367	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R368	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R369	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R370	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R371	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R372	1-216-031-00	METAL GLAZE	180	5%	1/10W	
R373	1-216-671-11	METAL CHIP	6.8K	0.50%	1/10W	
R374	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R375	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R376	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R377	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R378	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R379	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R380	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R381	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R382	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R383	1-216-653-11	METAL CHIP	1.2K	0.50%	1/10W	
R384	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R385	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R386	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R387	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R388	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R389	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R390	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R391	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R393	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W	
R394	1-216-109-00	METAL GLAZE	330K	5%	1/10W	
R395	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R396	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R397	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R398	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R399	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1301	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1302	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1303	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R1304	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1305	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1306	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1307	1-216-073-00	METAL GLAZE	10K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1308	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1309	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1310	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1311	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1312	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1313	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1314	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1315	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1316	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1317	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1318	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1319	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1320	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	
R1321	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1322	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R1323	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1324	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1325	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1326	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1327	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1328	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1329	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1330	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1331	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1332	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R1333	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R1334	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1335	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1336	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1337	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1338	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1339	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R1340	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1342	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1343	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1344	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1345	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R1346	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1347	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1348	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1349	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R1350	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R1351	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1352	1-216-039-00	METAL GLAZE	390	5%	1/10W	
R1353	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1354	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1355	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R1356	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1357	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1358	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R1362	1-216-105-00	METAL GLAZE	220K	5%	1/10W	
R1363	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1364	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R1373	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1374	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1379	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1380	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R1381	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R1382	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R1383	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R1384	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R1385	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1386	1-216-037-00	METAL GLAZE	330	5%	1/10W	
R1387	1-216-045-00	METAL GLAZE	680	5%	1/10W	
R1388	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R1389	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1390	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1391	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R1392	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1394	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1395	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1396	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R1399	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R5301	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R5302	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R5303	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R5304	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R5305	1-216-085-00	METAL GLAZE	33K	5%	1/10W	

<CRYSTAL>

X301	1-567-505-11	OSCILLATOR, CRYSTAL

****

*A-1346-136-A E2 BOARD, COMPLETE
****

<CAPACITOR>

C2302	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2303	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2310	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C2313	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C2314	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2315	1-126-157-11	ELECT	10MF	20%	16V
C2316	1-126-157-11	ELECT	10MF	20%	16V
C2317	1-126-157-11	ELECT	10MF	20%	16V
C2318	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2320	1-124-589-11	ELECT	47MF	20%	16V
C2321	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C2322	1-124-234-00	ELECT	22MF	20%	16V
C2323	1-124-234-00	ELECT	22MF	20%	16V
C2324	1-124-234-00	ELECT	22MF	20%	16V
C2325	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2326	1-124-589-11	ELECT	47MF	20%	16V
C2327	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2328	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2329	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2331	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2332	1-124-234-00	ELECT	22MF	20%	16V
C2333	1-124-234-00	ELECT	22MF	20%	16V
C2334	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2335	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2336	1-126-163-11	ELECT	4.7MF	20%	16V
C2337	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2338	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C2340	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2345	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2346	1-164-232-11	CERAMIC CHIP	0 01MF	10%	50V
C2347	1-163-367-11	CERAMIC CHIP	39PF	5%	50V
C2349	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2350	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2351	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2352	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C2353	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2354	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2357	1-126-301-11	ELECT	1MF	20%	50V

E2

REF.NO.	PART NO.	DESCRIPTION	REMARK
C2360	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
E2-25	*1-564-521-11	PLUG, CONNECTOR 6P	
E2-26	*1-564-522-11	PLUG, CONNECTOR 7P	
E2-46	*1-564-518-11	PLUG, CONNECTOR 3P	
E2-002	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2306	8-719-404-46	DIODE MA110	
D2307	8-719-946-98	DIODE FMN1	
D2308	8-719-946-98	DIODE FMN1	
D2309	8-719-404-46	DIODE MA110	
D2312	8-719-404-46	DIODE MA110	
D2313	8-719-404-46	DIODE MA110	
D2314	8-713-300-57	DIODE 1T33	
D2317	8-719-404-46	DIODE MA110	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC2301	8-759-066-52	IC PCA8510T/012-T	
IC2303	8-759-925-75	IC SN74HC05ANS	
IC2304	8-752-037-15	IC CXA1387S	
IC2306	8-759-011-65	IC MC74HC4053F	
IC2307	8-752-058-68	IC CXA1315M	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L2304	1-408-414-00	INDUCTOR 27UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q2301	8-729-903-10	TRANSISTOR FMW1	
Q2303	8-729-403-27	TRANSISTOR XN4401	
Q2304	8-729-925-79	TRANSISTOR IMX3	
Q2305	8-729-903-10	TRANSISTOR FMW1	
Q2306	8-729-403-27	TRANSISTOR XN4401	
Q2307	8-729-403-27	TRANSISTOR XN4401	
Q2308	8-729-403-27	TRANSISTOR XN4401	
Q2309	8-729-903-10	TRANSISTOR FMW1	
Q2310	8-729-403-27	TRANSISTOR XN4401	
Q2311	8-729-903-10	TRANSISTOR FMW1	
Q2312	8-729-403-27	TRANSISTOR XN4401	
Q2313	8-729-903-10	TRANSISTOR FMW1	
Q2314	8-729-403-27	TRANSISTOR XN4401	
Q2315	8-729-903-10	TRANSISTOR FMW1	
Q2317	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2318	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2319	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2320	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2321	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2322	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2324	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2326	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2327	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2330	8-729-903-10	TRANSISTOR FMW1	
Q2337	8-729-925-79	TRANSISTOR IMX3	
Q2338	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2339	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2340	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2341	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2342	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2345	8-729-422-27	TRANSISTOR 2SD601A-Q	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R2302	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2303	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2304	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2305	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2306	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R2307	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R2308	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R2309	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2310	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R2311	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R2312	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R2313	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R2314	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2315	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2317	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2318	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R2319	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
R2320	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2321	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R2322	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2323	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R2324	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2325	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2326	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2327	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R2328	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R2329	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R2330	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R2331	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R2332	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R2333	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R2334	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R2335	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R2336	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R2337	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2338	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2340	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2341	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2342	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2343	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2344	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2345	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R2346	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2347	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R2350	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2351	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2352	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2353	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R2354	1-216-210-00	METAL GLAZE 3.3K 5% 1/8W	
R2355	1-216-178-00	METAL GLAZE 150 5% 1/8W	
R2356	1-216-677-11	METAL CHIP 12K 0.50% 1/10W	
R2357	1-216-670-11	METAL CHIP 6.2K 0.50% 1/10W	
R2359	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R2360	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R2361	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R2362	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R2363	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2364	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R2365	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R2366	1-216-081-00	METAL GLAZE 22K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2367	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2368	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2371	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R2374	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W	
R2375	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2376	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2377	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2378	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2379	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2380	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2381	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2382	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2384	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R2385	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R2386	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2387	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2388	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2390	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2393	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R2394	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2395	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R2397	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R2399	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3301	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3302	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3303	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R3304	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3306	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R3307	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R3308	1-216-043-00	METAL GLAZE	560	5%	1/10W	
R3309	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3310	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3311	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3312	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3313	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R3314	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R3315	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3316	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3318	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3319	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3320	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R3321	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R3323	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3324	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3325	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3328	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3330	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3331	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3332	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3339	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R3340	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3341	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R3342	1-216-670-11	METAL CHIP	6.2K	0.50%	1/10W	
R3343	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3344	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3349	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3350	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3351	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3353	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3354	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3361	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3362	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3364	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3365	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3367	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3368	1-216-083-00	METAL GLAZE	27K	5%	1/10W	
R3369	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3370	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3371	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R3374	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	
R3392	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R3401	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R7312	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R7313	1-216-047-00	METAL GLAZE	820	5%	1/10W	
R7314	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION
X2301	1-577-071-11	VIBRATOR, CERAMIC

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*A-1394-442-A Y2 BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C401	1-124-234-00	ELECT	22MF	20%	16V	
C424	1-126-301-11	ELECT	1MF	20%	50V	
C425	1-126-301-11	ELECT	1MF	20%	50V	
C426	1-126-301-11	ELECT	1MF	20%	50V	
C427	1-124-465-00	ELECT	0.47MF	20%	50V	
C428	1-126-163-11	ELECT	4.7MF	20%	50V	
C429	1-124-478-11	ELECT	100MF	20%	25V	
C430	1-124-261-00	ELECT	10MF	20%	50V	
C431	1-126-301-11	ELECT	1MF	20%	50V	
C432	1-126-301-11	ELECT	1MF	20%	50V	
C433	1-131-347-00	TANTALUM	1MF	20%	16V	
C434	1-126-301-11	ELECT	1MF	20%	50V	
C435	1-130-309-00	FILM	0.033MF	5%	100V	
C436	1-126-301-11	ELECT	1MF	20%	50V	
C437	1-130-487-00	MYLAR	0.022MF	5%	50V	
C438	1-126-301-11	ELECT	1MF	20%	50V	
C439	1-124-034-51	ELECT	33MF	20%	16V	
C440	1-126-301-11	ELECT	1MF	20%	50V	
C441	1-126-301-11	ELECT	1MF	20%	50V	
C442	1-124-261-00	ELECT	10MF	20%	50V	
C443	1-124-589-11	ELECT	47MF	20%	16V	
C444	1-126-163-11	ELECT	4.7MF	20%	50V	
C445	1-126-163-11	ELECT	4.7MF	20%	50V	
C446	1-124-234-00	ELECT	22MF	20%	16V	
C447	1-126-301-11	ELECT	1MF	20%	50V	
C448	1-136-170-00	FILM	0.27MF	5%	50V	
C449	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C450	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C451	1-124-261-00	ELECT	10MF	20%	50V	
C452	1-124-261-00	ELECT	10MF	20%	50V	
C453	1-130-475-00	MYLAR	0.0022MF	5%	50V	
C454	1-131-368-00	TANTALUM	3.3MF	10%	16V	
C455	1-131-347-00	TANTALUM	1MF	20%	16V	
C456	1-136-171-00	FILM	0.33MF	5%	50V	
C457	1-136-175-00	FILM	0.68MF	5%	50V	
C458	1-126-101-11	ELECT	100MF	20%	16V	
C459	1-126-101-11	ELECT	100MF	20%	16V	
C460	1-126-101-11	ELECT	100MF	20%	16V	
C461	1-124-499-11	ELECT	1MF	20%	50V	
C462	1-124-499-11	ELECT	1MF	20%	50V	
C465	1-130-485-00	MYLAR	0.015MF	5%	50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C466	1-130-485-00	MYLAR 0.015MF 5%	50V
C467	1-136-169-00	FILM 0.22MF 5%	50V
C468	1-136-169-00	FILM 0.22MF 5%	50V
C469	1-126-157-11	ELECT 10MF 20%	16V
C470	1-126-157-11	ELECT 10MF 20%	16V
C471	1-124-589-11	ELECT 47MF 20%	16V
C472	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C473	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C474	1-124-234-00	ELECT 22MF 20%	16V
C475	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C476	1-124-234-00	ELECT 22MF 20%	16V
C477	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C478	1-124-478-11	ELECT 100MF 20%	25V
C479	1-126-163-11	ELECT 4.7MF 20%	50V
C480	1-124-768-11	ELECT 4.7MF 20%	50V
C481	1-124-768-11	ELECT 4.7MF 20%	50V
C482	1-126-163-11	ELECT 4.7MF 20%	50V
C483	1-163-113-00	CERAMIC CHIP 68PF 5%	50V
C484	1-163-113-00	CERAMIC CHIP 68PF 5%	50V
C485	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C487	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C488	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Y2-401	1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D405	8-719-107-13	DIODE RD18MB1	
D406	8-719-107-13	DIODE RD18MB1	
D407	8-719-107-13	DIODE RD18MB1	
D408	8-719-105-83	DIODE RD5.1MB3	
D409	8-719-981-50	DIODE RB-100A	
D410	8-719-981-50	DIODE RB-100A	
D413	8-719-158-19	DIODE RD6.2SB	
D414	8-719-158-55	DIODE RD15SB	
D415	8-719-158-55	DIODE RD15SB	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC403	8-759-996-43	IC RC4558PS	
IC404	8-759-067-24	IC 24C04AI/P	
IC406	8-752-037-24	IC CXA1264AS	
IC407	8-759-245-75	IC TA8184P	
IC408	8-752-057-18	IC CXA1315P	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q404	8-729-216-22	TRANSISTOR 2SA1162-G	
Q405	8-729-216-22	TRANSISTOR 2SA1162-G	
Q409	8-729 422-27	TRANSISTOR 2SD601A-Q	
Q410	8-729-422-27	TRANSISTOR 2SD601A-Q	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
R447	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R453	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R464	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R465	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R466	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R467	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R468	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R469	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R470	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R471	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R472	1-216-686-11	METAL CHIP 30K 0.50% 1/10W	
R473	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R474	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R475	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R476	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R477	1-216-676-11	METAL CHIP 11K 0.50% 1/10W	
R478	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R479	1-216-673-11	METAL CHIP 8.2K 0.50% 1/10W	
R480	1-216-676-11	METAL CHIP 11K 0.50% 1/10W	
R481	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R482	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R483	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R485	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R486	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R488	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R494	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R495	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R496	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R497	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R498	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R499	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R500	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R501	1-216-669-11	METAL CHIP 5.6K 0.50% 1/10W	
R502	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R503	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R504	1-216-669-11	METAL CHIP 5.6K 0.50% 1/10W	
R507	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R509	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R510	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R512	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R513	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R515	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R517	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R518	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R519	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R521	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R522	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R523	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R524	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R525	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R526	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R527	1-218-753-11	METAL CHIP 110K 0.50% 1/10W	
R528	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R529	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R531	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R532	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R533	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R535	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R536	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R537	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R538	1-218-753-11	METAL CHIP 110K 0.50% 1/10W	
R539	1-216-689-11	METAL CHIP 39K 0.50% 1/10W	
R540	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R541	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R542	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R543	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R546	1-216-682-11	METAL CHIP 20K 0.50% 1/10W	
R547	1-216-682-11	METAL CHIP 20K 0.50% 1/10W	

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X3

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1394-446-A	X3 BOARD, COMPLETE ******************			

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2501	1-124-477-11	ELECT	47MF	20%	16V
C2502	1-124-477-11	ELECT	47MF	20%	16V
C2505	1-124-638-11	ELECT	22MF	20%	6.3V
C2506	1-126-177-11	ELECT	100MF	20%	10V
C2507	1-126-163-11	ELECT	4.7MF	20%	16V
C2508	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C2509	1-126-163-11	ELECT	4.7MF	20%	50V
C2512	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2513	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C2514	1-126-163-11	ELECT	4.7MF	20%	16V
C2516	1-126-163-11	ELECT	4.7MF	20%	50V
C2517	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2518	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2519	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2520	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2521	1-163-088-00	CERAMIC CHIP	5PF	0.25PF	50V
C2522	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2523	1-163-100-00	CERAMIC CHIP	20PF	5%	50V
C2524	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2525	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2526	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2527	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2528	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2529	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2532	1-126-163-11	ELECT	4.7MF	20%	16V
C2536	1-124-589-11	ELECT	47MF	20%	16V
C2537	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2540	1-126-163-11	ELECT	4.7MF	20%	16V
C2544	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2545	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2546	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2547	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2548	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2549	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2550	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2551	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2552	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2553	1-126-177-11	ELECT	100MF	20%	10V
C2554	1-163-033-00	CERAMIC CHIP	0.022MF		50V
C2557	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2558	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2560	1-126-163-11	ELECT	4.7MF	20%	16V
C2561	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2562	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2563	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2566	1-126-163-11	ELECT	4.7MF	20%	16V
C2569	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2570	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2571	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2572	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2573	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2574	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2575	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C2577	1-124-465-00	ELECT	0.47MF	20%	50V
C2578	1-124-465-00	ELECT	0.47MF	20%	50V
C2579	1-163-018-00	CERAMIC CHIP	0.0056MF	10%	50V
C2580	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2581	1-164-695-11	CERAMIC CHIP	0.0022MF	5%	50V
C2582	1-124-234-00	ELECT	22MF	20%	16V
C2583	1-124-589-11	ELECT	47MF	20%	16V

REF.NO.	PART NO.	DESCRIPTION			REMARK
C2590	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V
C2591	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V
C2592	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V
C2593	1-135-179-21	TANTAL. CHIP	2.2MF	20%	16V

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D2501	8-719-404-46	DIODE MA110	

<FERRITE BEAD>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB2502	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB2504	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	

<FILTER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL2501	1-236-164-11	ENCAPSULATED COMPONENT	
FL2503	1-236-164-11	ENCAPSULATED COMPONENT	
FL2505	1-236-164-11	ENCAPSULATED COMPONENT	
FL2506	1-236-129-11	ENCAPSULATED COMPONENT	
FL2507	1-236-129-11	ENCAPSULATED COMPONENT	
FL2508	1-236-129-11	ENCAPSULATED COMPONENT	
FL2509	1-236-129-11	ENCAPSULATED COMPONENT	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC2501	8-759-052-52	IC L78M05T-FA	
IC2502	8-759-031-31	IC MC33174M	
IC2503	8-752-344-45	IC CXD2555Q	
IC2504	8-752-343-18	IC CXD2704Q	
IC2506	8-759-031-31	IC MC33174M	
IC2507	8-752-344-45	IC CXD2555Q	
IC2508	8-752-844-48	IC CXP5068H-205Q	
IC2509	8-759-042-02	IC S-80743AL-A7-S	
IC2510	8-752-332-80	IC CXD1160AQ	
IC2511	8-759-932-21	IC MB81256-12PSZ	
IC2512	8-759-069-14	IC M51132L	
IC2513	8-759-100-96	IC UPC4558G2	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J2501	1-573-966-11	PIN, CONNECTOR (PC BOARD) 36P	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L2501	1-410-204-31	INDUCTOR CHIP	10UH	
L2504	1-410-204-31	INDUCTOR CHIP	10UH	
L2505	1-410-196-11	INDUCTOR CHIP	2.2UH	
L2510	1-410-204-31	INDUCTOR CHIP	10UH	
L2511	1-410-204-31	INDUCTOR CHIP	10UH	
L2512	1-410-204-31	INDUCTOR CHIP	10UH	
L2513	1-410-204-31	INDUCTOR CHIP	10UH	
L2514	1-410-204-31	INDUCTOR CHIP	10UH	
L2515	1-410-204-31	INDUCTOR CHIP	10UH	
L2516	1-410-204-31	INDUCTOR CHIP	10UH	
L2517	1-410-204-31	INDUCTOR CHIP	10UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q2501	8-729-422-27	TRANSISTOR 2SD601A-Q	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R2501	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2502	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R2505	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R2506	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R2507	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2508	1-216-699-11	METAL CHIP	100K	0.50%	1/10W	
R2509	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2510	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R2511	1-216-667-11	METAL CHIP	4.7K	0.50%	1/10W	
R2512	1-216 667-11	METAL CHIP	4.7K	0.50%	1/10W	
R2513	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2518	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2519	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2520	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2521	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2522	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2531	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2532	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2533	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2534	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R2535	1-216 677-11	METAL CHIP	12K	0.50%	1/10W	
R2536	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R2537	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R2538	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2539	1-216 049-00	METAL GLAZE	1K	5%	1/10W	
R2540	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2541	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2542	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2543	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2544	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R2545	1-216-687-11	METAL CHIP	33K	0.50%	1/10W	
R2546	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R2547	1-216-685-11	METAL CHIP	27K	0.50%	1/10W	
R2548	1-216-681-11	METAL CHIP	18K	0.50%	1/10W	
R2549	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2550	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2551	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2552	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2557	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2559	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2560	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2561	1 216-073-00	METAL GLAZE	10K	5%	1/10W	
R2562	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2563	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2564	1 216-025-00	METAL GLAZE	100	5%	1/10W	
R2565	1-216 089-00	METAL GLAZE	47K	5%	1/10W	
R2566	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2567	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2568	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2569	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R2570	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R2571	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2572	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2573	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2574	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2575	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2576	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2577	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2578	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2579	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2583	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2584	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2585	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2590	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R2591	1-216-631-11	METAL CHIP	150	0.50%	1/10W	
R2592	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2593	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2594	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2595	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2596	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2597	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2598	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2599	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2600	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2601	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2602	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2603	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W	
R2605	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2606	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2607	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2608	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R2609	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2610	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2611	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R2612	1-216-025-00	METAL GLAZE	100	5%	1/10W	

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
X2501	1-579-692-31	VIBRATOR, CRYSTAL	

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*A-1195-067-A P2 BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3001	1-163-111-00	CERAMIC CHIP	56PF	5%	50V	
C3002	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C3003	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C3004	1-124-034-51	ELECT	33MF	20%	16V	
C3005	1-124-034-51	ELECT	33MF	20%	16V	
C3006	1-126-177-11	ELECT	100MF	20%	6.3V	
C3007	1-126-177-11	ELECT	100MF	20%	6.3V	
C3008	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C3009	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C3010	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C3011	1-163-119-00	CERAMIC CHIP	120PF	5%	50V	
C3012	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C3013	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C3014	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V	
C3015	1-130-483-00	MYLAR	0.01MF	5%	50V	
C3016	1-126-177-11	ELECT	100MF	20%	6.3V	
C3017	1-126-301-11	ELECT	1MF	20%	50V	
C3018	1-130-477-00	MYLAR	0.0033MF	5%	50V	
C3019	1-163-127-00	CERAMIC CHIP	270PF	5%	50V	
C3020	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C3021	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C3022	1-163-115-00	CERAMIC CHIP	82PF	5%	50V	
C3023	1-126-301-11	ELECT	1MF	20%	50V	
C3024	1-126-177-11	ELECT	100MF	20%	6.3V	
C3025	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3026	1-163-101-00	CERAMIC CHIP	22PF	5%	50V	
C3027	1-124-034-51	ELECT	33MF	20%	16V	
C3028	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V	
C3029	1-163-097-00	CERAMIC CHIP	15PF	5%	50V	
C3030	1-124-034-51	ELECT	33MF	20%	16V	
C3031	1-126-096-11	ELECT	10MF	20%	25V	

P2

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3032	1-130-479-00	MYLAR	0.0047MF	5%	50V	
C3033	1-124-465-00	ELECT	0.47MF	20%	50V	
C3034	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3035	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3036	1-124-034-51	ELECT	33MF	20%	16V	
C3037	1-126-163-11	ELECT	4.7MF	20%	50V	
C3038	1-124-034-51	ELECT	33MF	20%	16V	
C3039	1-126-163-11	ELECT	4.7MF	20%	50V	
C3040	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3041	1-124-034-51	ELECT	33MF	20%	16V	
C3042	1-130-491-00	MYLAR	0.047MF	5%	50V	
C3043	1-124-465-00	ELECT	0.47MF	20%	50V	
C3044	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3045	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3046	1-126-177-11	ELECT	100MF	20%	6.3V	
C3047	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3049	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3050	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3051	1-124-034-51	ELECT	33MF	20%	16V	
C3052	1-126-101-11	ELECT	100MF	20%	16V	
C3054	1-124-261-00	ELECT	10MF	20%	50V	
C3057	1-124-478-11	ELECT	100MF	20%	25V	
C3058	1-124-478-11	ELECT	100MF	20%	25V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION
P2-40	*1-564-519-11	PLUG, CONNECTOR 4P

<NETWORK>

REF.NO.	PART NO.	DESCRIPTION
CP3001	1-236-176-11	NETWORK, RES, THICK FILM
CP3002	1-236-176-11	NETWORK, RES, THICK FILM
CP3003	1-236-176-11	NETWORK, RES, THICK FILM

<DIODE>

REF.NO.	PART NO.	DESCRIPTION
D3002	8-713-300-57	DIODE 1T33
D3003	8-713-300-57	DIODE 1T33
D3004	8-719-404-46	DIODE MA110

<FILER>

REF.NO.	PART NO.	DESCRIPTION
FL3001	1-236-129-11	ENCAPSULATED COMPONENT
FL3002	1-236-129-11	ENCAPSULATED COMPONENT
FL3003	1-236-129-11	ENCAPSULATED COMPONENT
FL3004	1-236-071-11	ENCAPSULATED COMPONENT
FL3005	1-236-071-11	ENCAPSULATED COMPONENT
FL3006	1-236-129-11	ENCAPSULATED COMPONENT
FL3007	1-236-164-11	ENCAPSULATED COMPONENT
FL3008	1-236-163-11	ENCAPSULATED COMPONENT
FL3009	1-236-164-11	ENCAPSULATED COMPONENT
FL3010	1-236-129-11	ENCAPSULATED COMPONENT
FL3011	1-236-163-11	ENCAPSULATED COMPONENT
FL3012	1-236-163-11	ENCAPSULATED COMPONENT
FL3013	1-236-163-11	ENCAPSULATED COMPONENT
FL3014	1-236-129-11	ENCAPSULATED COMPONENT

<IC>

REF.NO.	PART NO.	DESCRIPTION
IC3001	8-759-032-11	IC MC74HC04AF
IC3002	8-759-032-11	IC MC74HC04AF
IC3003	8-752-332-83	IC CXD1220AQ
IC3004	8-759-630-63	IC M5M4C500L-10K
IC3005	8-759-605-14	IC M52678P
IC3006	8-759-630-63	IC M5M4C500L-10K
IC3007	8-759-011-65	IC MC74HC4053F
IC3008	8-759-630-63	IC M5M4C500L-10K
IC3009	8-759-605-14	IC M52678P
IC3010	8-759-112-06	IC UPC78N05H
IC3011	8-759-049-49	IC UPC7893AHF

<JACK>

REF.NO.	PART NO.	DESCRIPTION
J3001	1-573-965-21	PIN, CONNECTOR (PC BOARD) 50P

<COIL>

REF.NO.	PART NO.	DESCRIPTION	
L3001	1-410-470-11	INDUCTOR	10UH
L3002	1-410-470-11	INDUCTOR	10UH
L3003	1-410-470-11	INDUCTOR	10UH
L3004	1-410-470-11	INDUCTOR	10UH
L3005	1-408-420-00	INDUCTOR	82UH
L3005	1-408-420-00	INDUCTOR	82UH
L3006	1-408-421-00	INDUCTOR	100UH
L3007	1-410-434-21	INDUCTOR	180UH
L3008	1-408-427-00	INDUCTOR	330UH

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION
Q3001	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3002	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3003	8-729-216-22	TRANSISTOR 2AS1162-G
Q3004	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3005	8-729-216-22	TRANSISTOR 2AS1162-G
Q3006	8-729-216-22	TRANSISTOR 2AS1162-G
Q3007	8-729-216-22	TRANSISTOR 2AS1162-G
Q3008	8-729-216-22	TRANSISTOR 2AS1162-G
Q3009	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3010	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3011	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3012	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3013	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3014	8-729-422-27	TRANSISTOR 2SD601A-Q
Q3015	8-729-422-27	TRANSISTOR 2SD601A-Q

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3001	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3002	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3003	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3005	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3006	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3007	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3008	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3009	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3010	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3011	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3012	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R3013	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3014	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3015	1-216-097-00	METAL GLAZE	100K	5%	1/10W	
R3016	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R3017	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3018	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3019	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3020	1-216-017-00	METAL GLAZE	47	5%	1/10W	
R3021	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3022	1-216-049-00	METAL GLAZE	1K	5%	1/10W	

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P2 **G**

REF.NO.	PART NO.	DESCRIPTION	REMARK
R3024	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3025	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R3026	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3027	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R3028	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R3029	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R3030	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R3031	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R3032	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R3033	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R3034	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R3035	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R3036	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3037	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R3038	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3039	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R3040	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3041	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R3042	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R3043	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R3044	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3045	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R3046	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R3047	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3048	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3049	1-216-662-11	METAL CHIP 3K 0.50% 1/10W	
R3050	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R3051	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R3052	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R3054	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3055	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R3056	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3057	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R3058	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3059	1-216-689-11	METAL GLAZE 39K 5% 1/10W	
R3060	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R3061	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R3062	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3063	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R3064	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3065	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R3066	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R3067	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R3068	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R3069	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R3070	1-216-047-00	METAL GLAZE 820 5% 1/10W	
R3071	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R3072	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3073	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R3074	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3080 ⚠	1-216-358-91	METAL OXIDE 5.6 5% 1W	F

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV3001	1-238-012-11	RES, ADJ, CARBON 1K	
RV3002	1-238-012-11	RES, ADJ, CARBON 1K	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T3001	1-404-607-11	COIL	
T3002	1-404-607-11	COIL	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1316-160-A	G BOARD, COMPLETE *****************	
	4-382-854-11	SCREW (M3X10), P, SW (+)	

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C601 ⚠	1-136-311-51	FILM 0.47MF 20% 125V	
C602 ⚠	1-162-599-81	CERAMIC 0.0047MF 20% 400V	
C603 ⚠	1-162-599-81	CERAMIC 0.0047MF 20% 400V	
C604 ⚠	1-128-588-11	ELECT 1000MF 20% 200V	
C605	1-162-599-12	CERAMIC 0.0047MF 20% 400V	
C606	1-137-580-11	FILM 0.082MF 5% 100V	
C607	1-137-580-11	FILM 0.082MF 5% 100V	
C608	1-137-580-11	FILM 0.082MF 5% 100V	
C609	1-137-580-11	FILM 0.082MF 5% 100V	
C610	1-137-588-11	FILM 0.0047MF 5% 800V	
C611	1-137-592-11	FILM 0.01MF 5% 800V	
C612	1-164-625-11	CERAMIC 680PF 10% 500V	
C613	1-164-625-11	CERAMIC 680PF 10% 500V	
C614	1-164-625-11	CERAMIC 680PF 10% 500V	
C615	1-164-625-11	CERAMIC 680PF 10% 500V	
C616	1-124-443-00	ELECT 100MF 20% 10V	
C618	1-164-735-11	CAP, CERAMIC 1500PF	
C619	1-164-735-11	CAP, CERAMIC 1500PF	
C620 ⚠	1-161-741-51	CERAMIC 0.001MF 10% 400V	
C621 ⚠	1-161-741-51	CERAMIC 0.001MF 10% 400V	
C622	1-162-599-12	CERAMIC 0.0047MF 20% 400V	
C623	1-137-493-11	FILM 0.0047MF 5% 630V	
C624	1-126-301-11	ELECT 1MF 20% 50V	
C625	1-126-162-11	ELECT 3.3MF 20% 50V	
C626	1-130-480-00	MYLAR 0.0056MF 5% 50V	
C651	1-104-702-11	ELECT 470MF 20% 180V	
C651	1-124-960-11	ELECT 470MF 20% 180V	
C652	1-124-556-11	ELECT 2200MF 20% 16V	
C653	1-124-913-11	ELECT 470MF 20% 50V	
C654	1-124-607-11	ELECT 2200MF 20% 50V	
C655	1-162-117-00	CERAMIC 100PF 10% 500V	
C656	1-124-119-00	ELECT 330MF 20% 16V	
C657	1-106-351-00	MYLAR 0.0022MF 200V	
C658	1-126-157-11	ELECT 10MF 20% 16V	
C659	1-130-485-00	MYLAR 0.015MF 5% 50V	
C661	1-124-484-11	ELECT 220MF 20% 35V	
C662	1-124-484-11	ELECT 220MF 20% 35V	
C663	1-126-104-11	ELECT 470MF 20% 35V	
C666	1-126-101-11	ELECT 100MF 20% 16V	
C667	1-124-443-00	ELECT 100MF 20% 10V	
C668	1-124-638-11	ELECT 22MF 20% 6.3V	
C669	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C670	1-162-318-11	CERAMIC 0.001MF 10% 500V	
C672	1-124-484-11	ELECT 220MF 20% 35V	
C677 ⚠	1-136-311-51	FILM 0.47MF 20% 125V	
C678	1-124-360-00	ELECT 1000MF 20% 16V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
G3	*1-573-986-11	PIN, CONNECTOR (PC BOARD) 5P	
G4	*1-564-510-11	PLUG, CONNECTOR 7P	
G5	*1-564-507-11	PLUG, CONNECTOR 4P	
G27	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
G28	*1-573-963-11	PIN, CONNECTOR (PC BOARD) 3P	
G29	*1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
G31	*1-580-843-11	PIN, CONNECTOR (POWER)	
TP651	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D601 ⚠	8-719-022-99	DIODE D6SB60L	
D602	8-719-510-48	DIODE D1N20R	
D603	8-719-510-48	DIODE D1N20R	
D604	8-719-510-48	DIODE D1N20R	
D605	8-719-510-48	DIODE D1N20R	
D606	8-719-911-19	DIODE 1SS119	
D607	8-719-510-48	DIODE D1N20R	
D608	8-719-510-48	DIODE D1N20R	
D609	8-719-510-48	DIODE D1N20R	
D610	8-719-510-48	DIODE D1N20R	
D611	8-719-510-48	DIODE D1N20R	
D612	8-719-510-48	DIODE D1N20R	
D613	8-719-109-93	DIODE RD6.2ESB2	
D651	8-719-027-43	DIODE S2L20UF	
D652	8-719-027-43	DIODE S2L20UF	
D653	8-719-027-43	DIODE S2L20UF	
D654	8-719-027-43	DIODE S2L20UF	
D655	8-719-510-13	DIODE D10SC4MR	
D656	8-719-022-97	DIODE D2S4MF	
D657	8-719-510-02	DIODE D1NS4	
D658	8-719-027-22	DIODE D3S6M-F	
D659	8-719-027-22	DIODE D3S6M-F	
D660	8-719-027-22	DIODE D3S6M-F	
D661	8-719-027-22	DIODE D3S6M-F	
D663	8-719-510-02	DIODE D1NS4	
D665	8-719-510-02	DIODE D1NS4	
D666	8-719-109-85	DIODE RD5.1ESB2	
D667	8-719-911-19	DIODE 1SS119	
D668	8-719-911-19	DIODE 1SS119	
D669	8-719-109-54	DIODE RD2.2ESB2	
D670	8-719-911-19	DIODE 1SS119	
D671	8-719-110-31	DIODE RD12ESB2	
D672	8-719-911-19	DIODE 1SS119	
		<FUSE>	
F1 ⚠	1-532-783-21	FUSE, MICRO (SECONDARY) 5A/125V	
F601 ⚠	1-576-222-11	FUSE 6.3A/125V	
	1-533-190-11	CLIP, FUSE; F601	
F602 ⚠	1-576-107-22	FUSE 3.15A/250V	
	1-533-223-11	CLIP, FUSE; F602	
		<FERRITE BEAD>	
FB651	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB652	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB653	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB654	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB655	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB656	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB659	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB660	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB661	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB662	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB663	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB669	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB670	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
		<IC>	
IC651 ⚠	1-809-524-12	POWER MODULE DM-44A	

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC654	8-719-156-73	PHOTO COUPLER PS2501-1LB	
		<COIL>	
L651	1-412-526-11	INDUCTOR 12UH	
L652	1-410-673-31	INDUCTOR 68UH	
L653	1-412-532-11	INDUCTOR 39UH	
L654	1-412-532-11	INDUCTOR 39UH	
L655	1-412-532-11	INDUCTOR 39UH	
L656	1-412-526-11	INDUCTOR 12UH	
		<TRANSISTOR>	
Q601	8-729-927-23	TRANSISTOR 2SC4664NPR-F	
Q602	8-729-927-23	TRANSISTOR 2SC4664NPR-F	
Q603	8-729-927-23	TRANSISTOR 2SC4664NPR-F	
Q604	8-729-927-23	TRANSISTOR 2SC4664NPR-F	
Q605	8-729-209-15	TRANSISTOR 2SD2012	
Q652	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q653	8-729-201-53	TRANSISTOR 2SA1015-GR	
Q654	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q655	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q656	8-729-119-78	TRANSISTOR 2SC2785-HFE	
		<RESISTOR>	
R601	1-249-388-11	CARBON 3.9 5% 1/4W	F
R602 ⚠	1-205-707-12	WIREWOUND 2.2 5% 10W	
R603	1-247-889-00	CARBON 270K 5% 1/4W	
R604 ⚠	1-216-443-91	METAL OXIDE 56K 5% 1W	F
R605 ⚠	1-216-443-91	METAL OXIDE 56K 5% 1W	F
R606 ⚠	1-216-443-91	METAL OXIDE 56K 5% 1W	F
R607 ⚠	1-216-443-91	METAL OXIDE 56K 5% 1W	F
R608 ⚠	1-216-352-91	METAL OXIDE 1.8 5% 1W	F
R609 ⚠	1-216-352-91	METAL OXIDE 1.8 5% 1W	F
R610 ⚠	1-216-352-91	METAL OXIDE 1.8 5% 1W	F
R611 ⚠	1-216-352-91	METAL OXIDE 1.8 5% 1W	F
R612	1-249-377-11	CARBON 0.47 5% 1/4W	F
R613	1-215-447-00	METAL 12K 1% 1/4W	
R614	1-215-433-00	METAL 3.3K 1% 1/4W	
R615	1-249-441-11	CARBON 100K 5% 1/4W	
R616	1-249-417-11	CARBON 1K 5% 1/4W	
R617	1-249-417-11	CARBON 1K 5% 1/4W	
R618	1-247-688-11	CARBON 10 5% 1/4W	F
R619 ⚠	1-216-343-91	METAL OXIDE 0.33 5% 1W	F
R620	1-202-730-00	SOLID 8.2M 20% 1/2W	
R621	1-249-423-11	CARBON 3.3K 5% 1/4W	
R622 ⚠	1-202-888-91	SOLID 2.2M 20% 1/2W	
R623	1-212-956-00	FUSIBLE 8.2 5% 1/2W	F
R651	1-249-405-11	CARBON 100 5% 1/4W	F
R652 ⚠	1-215-868-91	METAL OXIDE 680 5% 1W	F
R653	1-249-405-11	CARBON 100 5% 1/4W	
R654	1-249-399-11	CARBON 33 5% 1/4W	F
R655	1-249-393-11	CARBON 10 5% 1/4W	F
R656	1-249-443-11	CARBON 0.47 5% 1/4W	F
R657 ⚠	1-216-357-91	METAL OXIDE 4.7 5% 1W	F
R658	1-215-408-00	METAL 300 1% 1/4W	
R659	1-249-443-11	CARBON 0.47 5% 1/4W	F
R660	1-215-446-00	METAL 11K 1% 1/4W	
R661	1-215-418-00	METAL 750 1% 1/4W	
R662	1-249-421-11	CARBON 2.2K 5% 1/4W	
R663	1-249-410-11	CARBON 270 5% 1/4W	
R664 ⚠	1-215-861-91	METAL OXIDE 47 5% 1W	F
R665	1-215-403-00	METAL 180 1% 1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R666	1-215-421-00	METAL	1K	1%	1/4W	
R667	1-215-432-00	METAL	3K	1%	1/4W	
R668 ⚠	1-216-482-51	METAL OXIDE	1.8K	5%	3W	F
R669	1-249-421-11	CARBON	2.2K	5%	1/4W	
R670	1-249-412-11	CARBON	390	5%	1/4W	
R671 ⚠	1-216-384-51	METAL OXIDE	0.39	5%	3W	F
R672	1-249-443-11	CARBON	0.47	5%	1/4W	F
R673	1-249-415-11	CARBON	680	5%	1/4W	
R674	1-249-421-11	CARBON	2.2K	5%	1/4W	
R675	1-249-415-11	CARBON	680	5%	1/4W	
R676	1-249-377-11	CARBON	0.47	5%	1/4W	F
R677	1-249-433-11	CARBON	22K	5%	1/4W	
R678	1-249-429-11	CARBON	10K	5%	1/4W	
R679 ⚠	1-216-428-91	METAL OXIDE	180	5%	1W	F
R680 ⚠	1-216-428-91	METAL OXIDE	180	5%	1W	F
R681	1-249-377-11	CARBON	0.47	5%	1/4W	F
R682	1-249-443-11	CARBON	0.47	5%	1/4W	F

<RELAY>

RY601	1-515-516-00	RELAY
RY602 ⚠	1-515-669-21	RELAY

<TRANSFORMER>

T601 ⚠	1-424-585-11	TRANSFORMER, LINE FILTER
T602 ⚠	1-424-585-11	TRANSFORMER, LINE FILTER
T603	1-450-300-31	TRANSFORMER, CONVERTER DRIVE
T604 ⚠	1-450-958-12	TRANSFORMER, CONVERTER (PRT)
T605	1-424-663-11	TRANSFORMER, FERRIITE (SBT)

<THERMISTOR>

THP601 ⚠	1-809-539-11	THERMISTOR, POSITIVE

<VARISTOR>

VDR601 ⚠	1-809-786-11	VARISTOR
VDR602	1-809-264-71	VARISTOR

****

*A-1331-271-A C BOARD, COMPLETE
****

<CAPACITOR>

C701	1-162-116-00	CERAMIC	680PF	10%	2KV
C702	1-137-490-11	FILM	0.01MF	10%	1KV
C704	1-123-946-00	ELECT	4.7MF	20%	250V
C705	1-106-375-12	MYLAR	0.022MF		200V
C706	1-106-375-12	MYLAR	0.022MF		200V
C707	1-164-083-11	CERAMIC	680PF	10%	50V
C708	1-164-083-11	CERAMIC	680PF	10%	50V
C709	1-164-083-11	CERAMIC	680PF	10%	50V
C710	1-164-083-11	CERAMIC	680PF	10%	50V
C711	1-124-120-11	ELECT	220MF	20%	16V
C712	1-164-082-11	CERAMIC	560PF	10%	50V
C713	1-164-083-11	CERAMIC	680PF	10%	50V
C715	1-102-129-00	CERAMIC	0.01MF	10%	50V
C718	1-102-129-00	CERAMIC	0.01MF	10%	50V
C733	1-102-074-00	CERAMIC	0.001MF	10%	50V

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
C2	*1-573-964-11	PIN, CONNECTOR (PC BOARD) 6P	
C24	*1-564-511-51	PLUG, CONNECTOR 8P	
C42	*1-691-134-11	PIN, CONNECTOR (PC BOARD) 2P	

<DIODE>

D701	8-719-911-19	DIODE 1SS119
D702	8-719-911-19	DIODE 1SS119
D703	8-719-911-19	DIODE 1SS119
D704	8-719-911-19	DIODE 1SS119
D705	8-719-911-19	DIODE 1SS119
D706	8-719-911-19	DIODE 1SS119
D707	8-719-911-19	DIODE 1SS119
D708	8-719-911-19	DIODE 1SS119
D709	8-719-911-19	DIODE 1SS119
D710	8-719-901-83	DIODE 1SS83
D711	8-719-901-83	DIODE 1SS83
D712	8-719-901-83	DIODE 1SS83
D713	8-719-901-83	DIODE 1SS83
D714	8-719-911-19	DIODE 1SS119

<JACK>

J701 ⚠	1-540-223-11	SOCKET, PICTURE TUBE

<COIL>

L701	1-410-671-31	INDUCTOR	47UH
L702	1-410-645-31	INDUCTOR	100UH
L703	1-410-677-31	INDUCTOR	180UH
L706	1-410-677-31	INDUCTOR	180UH

<TRANSISTOR>

Q701	8-729-326-11	TRANSISTOR 2SC2611
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q703	8-729-200-17	TRANSISTOR 2SA1091-O
Q704	8-729-326-11	TRANSISTOR 2SC2611
Q705	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q706	8-729-200-17	TRANSISTOR 2SA1091-O
Q707	8-729-200-17	TRANSISTOR 2SA1091-O
Q708	8-729-326-11	TRANSISTOR 2SC2611
Q709	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q710	8-729-255-12	TRANSISTOR 2SC2551-O
Q711	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q712	8-729-255-12	TRANSISTOR 2SC2551-O
Q714	8-729-200-17	TRANSISTOR 2SA1091-O
Q715	8-729-200-17	TRANSISTOR 2SA1091-O
Q716	8-729-200-17	TRANSISTOR 2SA1091-O

<RESISTOR>

R702	1-202-883-11	SOLID	680K	20%	1/2W	
R703	1-202-838-00	SOLID	100K	20%	1/2W	
R705	1-249-433-11	CARBON	22K	5%	1/4W	
R706	1-202-815-11	SOLID	47K	20%	1/2W	
R707	1-202-842-11	SOLID	220K	20%	1/2W	
R708	1-202-818-00	SOLID	1K	20%	1/2W	
R709	1-202-818-00	SOLID	1K	20%	1/2W	
R710	1-202-818-00	SOLID	1K	20%	1/2W	
R711	1-249-433-11	CARBON	22K	5%	1/4W	
R713 ⚠	1-216-486-51	METAL OXIDE	8.2K	5%	3W	F
R715	1-202-549-00	SOLID	100	10%	1/2W	
R716 ⚠	1-216-486-51	METAL OXIDE	8.2K	5%	3W	F
R720 ⚠	1-216-486-51	METAL OXIDE	8.2K	5%	3W	F

C **D**

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R722	1-249-433-11	CARBON	22K	5%	1/4W	
R723	1-249-405-11	CARBON	100	5%	1/4W	
R724	1-249-405-11	CARBON	100	5%	1/4W	
R725	1-249-429-11	CARBON	10K	5%	1/4W	
R726	1-249-408-11	CARBON	180	5%	1/4W	
R727	1-249-429-11	CARBON	10K	5%	1/4W	
R728	1-249-408-11	CARBON	180	5%	1/4W	
R729	1-249-405-11	CARBON	100	5%	1/4W	
R730	1-249-408-11	CARBON	180	5%	1/4W	
R731	1-249-409-11	CARBON	220	5%	1/4W	F
R732	1-249-409-11	CARBON	220	5%	1/4W	F
R733	1-249-409-11	CARBON	220	5%	1/4W	F
R735	1-249-418-11	CARBON	1.2K	5%	1/4W	
R737	1-249-418-11	CARBON	1.2K	5%	1/4W	
R739	1-249-433-11	CARBON	22K	5%	1/4W	
R740 ⚠	1-215-902-91	METAL OXIDE	47K	5%	2W	F
R741	1-249-417-11	CARBON	1K	5%	1/4W	F
R742	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R743	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R744	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R745	1-249-417-11	CARBON	1K	5%	1/4W	F
R746 ⚠	1-215-879-91	METAL OXIDE	47K	5%	1W	F
R747	1-249-429-11	CARBON	10K	5%	1/4W	F
R748 ⚠	1-216-365-91	METAL OXIDE	0.47	5%	2W	F
R749	1-249-437-11	CARBON	47K	5%	1/4W	
R750	1-249-409-11	CARBON	220	5%	1/4W	F
R751	1-249-395-11	CARBON	15	5%	1/4W	
R752	1-249-393-11	CARBON	10	5%	1/4W	
R753	1-249-390-11	CARBON	5.6	5%	1/4W	
R754	1-249-418-11	CARBON	1.2K	5%	1/4W	
R777	1-249-441-11	CARBON	100K	5%	1/4W	

<VARIABLE RESISTOR>

RV701	1-230-641-11	RES, ADJ, METAL GLAZE 2.2M
RV702	1-241-714-11	RES, ADJ, METAL FILM 110M

****

*A-1341-664-A D BOARD, COMPLETE (KV-27XBR96S(U/C))
****
*A-1341-678-A D BOARD, COMPLETE (KV-32XBR96S(U/C))
****

4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION			REMARK
C801	1-124-589-11	ELECT	47MF	20%	16V
C802	1-124-589-11	ELECT	47MF	20%	16V
C804	1-130-483-00	MYLAR	0.01MF	5%	50V
C805	1-136-165-00	FILM	0.1MF	5%	50V
C806	1-136-165-00	FILM	0.1MF	5%	50V
C807	1-124-360-00	ELECT	1000MF	20%	16V
C809	1-136-104-00	FILM	0.16MF	5%	200V
C810	1-136-177-00	FILM	1MF	5%	50V
C811	1-162-318-11	CERAMIC	0.001MF	10%	500V
C812	1-126-163-11	ELECT	4.7MF	20%	50V
C813	1-130-491-00	MYLAR	0.047MF	5%	50V
C814	1-124-261-00	ELECT	10MF	20%	50V
C815	1-124-261-00	ELECT	10MF	20%	50V
C816	1-124-234-00	ELECT	22MF	20%	16V
C817	1-126-163-11	ELECT	4.7MF	20%	50V
C818	1-124-589-11	ELECT	47MF	20%	16V
C819	1-136-165-00	FILM	0.1MF	5%	50V
C820	1-126-103-11	ELECT	470MF	20%	16V
C901	1-136-173-00	FILM	0.47MF	5%	50V
C902	1-124-261-00	ELECT	10MF	20%	50V
C903	1-136-169-00	FILM	0.22MF	5%	50V
C904	1-130-471-00	MYLAR	0.001MF	5%	50V
C905	1-124-261-00	ELECT	10MF	20%	50V
C906	1-124-046-00	ELECT	10MF	20%	160V
C907	1-124-465-00	ELECT	0.47MF	20%	50V
C908	1-102-112-00	CERAMIC	330PF	10%	50V
C910	1-136-103-00	FILM	0.1MF	5%	200V
C911	1-136-165-00	FILM	0.1MF	5%	50V
C913	1-124-589-11	ELECT	47MF	20%	16V
C914	1-106-367-00	MYLAR	0.01MF	10%	100V
C915	1-126-301-11	ELECT	1MF	20%	50V
C917	1-130-471-00	MYLAR	0.001MF	5%	50V
C918	1-102-074-00	CERAMIC	0.001MF	10%	50V
C920	1-136-601-11	FILM	0.01MF	5%	630V
C922	1-124-557-11	ELECT	1000MF	20%	25V
C923	1-130-471-00	MYLAR	0.001MF	5%	50V
C925	1-124-261-00	ELECT	10MF	20%	50V
C926	1-136-165-00	FILM	0.1MF	5%	50V
C927	1-136-171-00	FILM	0.33MF	5%	50V
C928	1-124-261-00	ELECT	10MF	20%	50V
C930	1-130-483-00	MYLAR	0.01MF	5%	50V
C931	1-130-475-00	MYLAR	0.0022MF	10%	50V

<CONNECTOR>

D14	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P
D18	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P
D20	1-564-524-11	PLUG, CONNECTOR 9P
DY2	*1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P

<DIODE>

D801	8-719-987-87	DIODE ERA85-009
D802	8-719-911-19	DIODE 1SS119
D803	8-719-911-19	DIODE 1SS119
D804	8-719-911-19	DIODE 1SS119
D805	8-719-801-35	THYRISTOR SHOR3D42
D806	8-719-980-78	DIODE ERA83-006
D807	8-719-980-78	DIODE ERA83-006
D808	8-719-911-19	DIODE 1SS119
D809	8-719-911-19	DIODE 1SS119
D810	8-719-911-19	DIODE 1SS119
D811	8-719-302-43	DIODE EL1Z
D812	8-719-911-19	DIODE 1SS119
D813	8-719-109-88	DIODE RD5.6ESB1
D814	8-719-121-24	DIODE RD9.1ESL
D815	8-719-911-19	DIODE 1SS119
D816	8-719-911-19	DIODE 1SS119
D901	8-719-911-19	DIODE 1SS119
D902	8-719-109-96	DIODE RD6.8ESB1
D903	8-719-979-85	DIODE EGP20G
D906	8-719-980-78	DIODE ERA83-006
D907	8-719-911-19	DIODE 1SS119
D908	8-719-980-78	DIODE ERA83-006
D911	8-719-911-19	DIODE 1SS119

<IC>

IC801	8-749-920-58	IC SI-3090CA
IC802	8-752-052-88	IC CXA1526P
IC803	8-759-135-80	IC UPC358C

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REF.NO.	PART NO.	DESCRIPTION				REMARK
IC901	8-759-135-80	IC UPC358C				
IC903	8-759-987-16	IC LM393P				
		<COIL>				
L801	1-459-592-11	COIL (WITH CORE) (PMC)				
L802	1-459-941-12	COIL, CHOKE 3.4MMH				
L901	1-410-093-11	INDUCTOR 33MMH				
L902	1-459-075-00	COIL,DYNAMIC CONVERSION CHOKE				
		<TRANSISTOR>				
Q802	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q803	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q805	8-729-140-97	TRANSISTOR 2SB734-34				
Q806	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q807	8-729-140-97	TRANSISTOR 2SB734-34				
Q808	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q809	8-729-209-15	TRANSISTOR 2SD2012				
Q810	8-729-140-96	TRANSISTOR 2SD774-34				
Q811	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q901	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q902	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q903	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q904	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q905	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q906	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q907	8-729-119-80	TRANSISTOR 2SC2688-LK				
Q908	8-729-300-80	TRANSISTOR 2SB860				
Q909	8-729-140-96	TRANSISTOR 2SD774-34				
Q910	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q911	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q912	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q913	8-729-011-02	TRANSISTOR 2SK1917				
Q914	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		<RESISTOR>				
R801	1-249-409-11	CARBON	220	5%	1/4W	
R802	1-249-409-11	CARBON	220	5%	1/4W	
R804	1-247-891-00	CARBON	330K	5%	1/4W	
R806	1-247-885-00	CARBON	180K	5%	1/4W	
R807	1-247-891-00	CARBON	330K	5%	1/4W	
R808	1-215-461-00	METAL	47K	1%	1/4W	
R809	1-249-423-11	CARBON	3.3K	5%	1/4W	
R810	1-249-413-11	CARBON	470	5%	1/4W	
R811	1-249-434-11	CARBON	27K	5%	1/4W	
R812	1-249-438-11	CARBON	56K	5%	1/4W	
R813	1-249-417-11	CARBON	1K	5%	1/4W	
R815	1-249-427-11	CARBON	6.8K	5%	1/4W	
R816	1-249-425-11	CARBON	4.7K	5%	1/4W	
R817	1-249-422-11	CARBON	2.7K	5%	1/4W	
R818	1-249-417-11	CARBON	1K	5%	1/4W	
R819	1-249-432-11	CARBON	18K	5%	1/4W	
R820	1-249-417-11	CARBON	1K	5%	1/4W	
R821 ⚠	1-216-379-91	METAL OXIDE	6.8	5%	2W	F
R822	1-249-423-11	CARBON	3.3K	5%	1/4W	
R824	1-249-417-11	CARBON	1K	5%	1/4W	F
R825 ⚠	1-215-857-91	METAL OXIDE	10	5%	1W	F
R826	1-249-404-00	CARBON	82	5%	1/4W	
R827 ⚠	1-215-875-91	METAL OXIDE	10K	5%	1W	F
R828	1-249-441-11	CARBON	100K	5%	1/4W	
R829	1-249-414-11	CARBON	560	5%	1/4W	
R830	1-249-411-11	CARBON	330	5%	1/4W	
R831	1-249-426-11	CARBON	5.6K	5%	1/4W	
R832 ⚠	1-215-887-91	METAL OXIDE	150	5%	2W	F
R833	1-249-421-11	CARBON	2.2K	5%	1/4W	
R834	1-249-438-11	CARBON	56K	5%	1/4W	
R835	1-249-393-11	CARBON	10	5%	1/4W	
R836	1-249-435-11	CARBON	33K	5%	1/4W	
R837	1-249-435-11	CARBON	33K	5%	1/4W	
R838 ⚠	1-216-359-91	METAL OXIDE	6.8	5%	1W	F
R839	1-249-410-11	CARBON	270	5%	1/4W	
R840	1-249-429-11	CARBON	10K	5%	1/4W	
R841	1-249-437-11	CARBON	47K	5%	1/4W	
R842	1-249-429-11	CARBON	10K	5%	1/4W	
R843	1-249-421-11	CARBON	2.2K	5%	1/4W	
R901	1-249-425-11	CARBON	4.7K	5%	1/4W	
R902	1-249-438-11	CARBON	56K	5%	1/4W	
R903	1-249-429-11	CARBON	10K	5%	1/4W	
R904	1-249-429-11	CARBON	10K	5%	1/4W	
R905	1-249-429-11	CARBON	10K	5%	1/4W	
R906	1-249-425-11	CARBON	4.7K	5%	1/4W	
R907	1-249-429-11	CARBON	10K	5%	1/4W	
R908	1-249-437-11	CARBON	47K	5%	1/4W	
R909	1-249-433-11	CARBON	22K	5%	1/4W	
R910	1-249-431-11	CARBON	15K	5%	1/4W	
R911	1-247-895-00	CARBON	470K	5%	1/4W	
R912	1-249-429-11	CARBON	10K	5%	1/4W	
R913	1-249-425-11	CARBON	4.7K	5%	1/4W	
R914	1-249-401-11	CARBON	47	5%	1/4W	
R915	1-249-425-11	CARBON	4.7K	5%	1/4W	
R916	1-249-421-11	CARBON	2.2K	5%	1/4W	
R917	1-249-439-11	CARBON	68K	5%	1/4W	
R918	1-249-413-11	CARBON	470	5%	1/4W	
R919	1-249-437-11	CARBON	47K	5%	1/4W	
R920	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R921 ⚠	1-215-876-91	METAL OXIDE	15K	5%	1W	F
R922 ⚠	1-215-870-91	METAL OXIDE	1.5K	5%	1W	F
R923	1-249-429-11	CARBON	10K	5%	1/4W	
R924	1-249-423-11	CARBON	3.3K	5%	1/4W	
R925	1-249-415-11	CARBON	680	5%	1/4W	
R926	1-249-409-11	CARBON	220	5%	1/4W	
R927	1-249-429-11	CARBON	10K	5%	1/4W	
R928	1-249-421-11	CARBON	2.2K	5%	1/4W	
R929	1-249-429-11	CARBON	10K	5%	1/4W	
R930	1-249-434-11	CARBON	27K	5%	1/4W	
R931	1-249-421-11	CARBON	2.2K	5%	1/4W	
R933	1-249-421-11	CARBON	2.2K	5%	1/4W	
R934	1-249-439-11	CARBON	68K	5%	1/4W	
R935	1-249-429-11	CARBON	10K	5%	1/4W	
R936	1-249-429-11	CARBON	10K	5%	1/4W	
R937	1-249-421-11	CARBON	2.2K	5%	1/4W	
R938	1-249-405-11	CARBON	100	5%	1/4W	
R939	1-249-405-11	CARBON	100	5%	1/4W	F
R940	1-249-405-11	CARBON	100	5%	1/4W	F
R941	1-249-405-11	CARBON	100	5%	1/4W	
R944	1-249-432-11	CARBON	18K	5%	1/4W	
R945	1-247-895-00	CARBON	470K	5%	1/4W	
R946	1-249-425-11	CARBON	4.7K	5%	1/4W	
R947	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R948	1-249-435-11	CARBON	33K	5%	1/4W	
R950	1-249-425-11	CARBON	4.7K	5%	1/4W	
R952	1-249-405-11	CARBON	100	5%	1/4W	
R953	1-247-889-00	CARBON	270K	5%	1/4W	
R954	1-247-889-00	CARBON	270K	5%	1/4W	
R956	1-249-433-11	CARBON	22K	5%	1/4W	

****

V | VC

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1342-220-A	V BOARD, COMPLETE *****************				
	4-382-854-11	SCREW (M3X10), P, SW (+)				
		<CAPACITOR>				
C951	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C952	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C961	1-161-830-00	CERAMIC	0.0047MF		500V	
C962	1-102-951-00	CERAMIC	15PF	5%	50V	
C963	1-123-935-00	ELECT	33MF	20%	160V	
C964	1-126-101-11	ELECT	100MF	20%	16V	
C968	1-106-383-00	MYLAR	0.047MF		200V	
C969	1-124-799-11	ELECT	2.2MF	20%	160V	
C970	1-106-391-12	MYLAR	0.1MF	10%	200V	
C971	1-126-157-11	ELECT	10MF	20%	16V	
C972	1-126-541-11	ELECT	330MF	20%	16V	
C973	1-106-383-00	MYLAR	0.047MF		200V	
C974	1-102-959-00	CERAMIC	22PF	5%	50V	
C975	1-126-101-11	ELECT	100MF	20%	16V	
C976	1-126-157-11	ELECT	10MF	20%	16V	
C977	1-102-963-00	CERAMIC	33PF	5%	50V	
C978	1-130-471-00	MYLAR	0.001MF	5%	50V	
C979	1-130-471-00	MYLAR	0.001MF	5%	50V	
C980	1-124-915-11	ELECT	10MF	20%	16V	
		<CONNECTOR>				
V20	*1-564-512-11	PLUG, CONNECTOR 9P				
		<DIODE>				
D961	8-719-911-19	DIODE 1SS119				
D963	8-719-911-19	DIODE 1SS119				
D964	8-719-911-19	DIODE 1SS119				
D965	8-719-911-19	DIODE 1SS119				
D966	8-719-911-19	DIODE 1SS119				
D967	8-719-110-88	DIODE RD39ESB2				
D968	8-719-110-88	DIODE RD39ESB2				
		<COIL>				
L962	1-408-416-00	INDUCTOR	39UH			
		<TRANSISTOR>				
Q956	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q961	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q962	8-729-119-76	TRANSISTOR 2SA1175-HFE				
Q963	8-729-017-05	TRANSISTOR 2SA1837				
Q964	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q965	8-729-017-06	TRANSISTOR 2SC4793				
Q966	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q967	8-729-142-86	TRANSISTOR 2SC3733				
		<RESISTOR>				
R951	1-249-434-11	CARBON	27K	5%	1/4W	
R952	1-249-423-11	CARBON	3.3K	5%	1/4W	
R953	1-249-423-11	CARBON	3.3K	5%	1/4W	
R954	1-247-903-00	CARBON	1M	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R955	1-249-421-11	CARBON	2.2K	5%	1/4W	
R962	1-249-409-11	CARBON	220	5%	1/4W	
R963	1-249-419-11	CARBON	1.5K	5%	1/4W	
R964	1-247-734-11	CARBON	39	5%	1/2W	F
R965	1-249-414-11	CARBON	560	5%	1/4W	F
R966	1-249-418-11	CARBON	1.2K	5%	1/4W	
R968	1-249-418-11	CARBON	1.2K	5%	1/4W	
R969	1-249-384-11	CARBON	1.8	5%	1/4W	F
R970	1-249-435-11	CARBON	33K	5%	1/4W	
R972	1-249-432-11	CARBON	18K	5%	1/4W	
R974 ⚠	1-216-476-51	METAL OXIDE	180	5%	3W	F
R975	1-249-417-11	CARBON	1K	5%	1/4W	F
R976	1-249-432-11	CARBON	18K	5%	1/4W	
R977	1-249-438-11	CARBON	56K	5%	1/4W	
R978	1-249-430-11	CARBON	12K	5%	1/4W	
R979	1-249-414-11	CARBON	560	5%	1/4W	
R980	1-249-420-11	CARBON	1.8K	5%	1/4W	
R981	1-249-415-11	CARBON	680	5%	1/4W	
R982	1-249-384-11	CARBON	1.8	5%	1/4W	F
R983	1-249-441-11	CARBON	100K	5%	1/4W	
R984	1-249-405-11	CARBON	100	5%	1/4W	
R985	1-249-400-11	CARBON	39	5%	1/4W	F
R986	1-249-435-11	CARBON	33K	5%	1/4W	
R987	1-249-428-11	CARBON	8.2K	5%	1/4W	
R988	1-249-418-11	CARBON	1.2K	5%	1/4W	
R989	1-249-413-11	CARBON	470	5%	1/4W	
R990 ⚠	1-216-451-91	METAL OXIDE	120	5%	2W	F
R991	1-249-409-11	CARBON	220	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	*A-1347-079-A	VC BOARD, COMPLETE (KV-27XBR96S(U/C)) *****************				
	*A-1347-081-A	VC BOARD, COMPLETE (KV-32XBR96S(U/C)) *****************				
	3-710-578-01	COVER, VOLUME, 6 MOLD				
		<CAPACITOR>				
C1801	1-124-478-11	ELECT	100MF	20%	25V	
C1802	1-124-478-11	ELECT	100MF	20%	25V	
C1803	1-130-487-00	MYLAR	0.022MF	5%	50V	
C1804	1-102-973-00	CERAMIC	100PF	5%	50V	
C1805	1-130-471-00	FILM	0.001MF	5%	50V	
C1806	1-130-487-00	MYLAR	0.022MF	5%	50V	
C1807	1-130-471-00	MYLAR	0.001MF	5%	50V	
C1808	1-102-228-00	CERAMIC	470PF	10%	500V	
C1809	1-124-798-11	ELECT	1MF	20%	160V	
C1810	1-130-495-00	MYLAR	0.1MF	5%	50V	
C1811	1-124-798-11	ELECT	1MF	20%	160V	
C1812	1-136-104-00	FILM	0.16MF	5%	200V	(KV-27XBR96S(U/C)
C1812	1-136-756-11	FILM	0.24MF	5%	200V	(KV-32XBR96S(U/C)
C1813	1-129-765-00	FILM	0.047F	10%	200V	(KV-27XBR96S(U/C)
		<CONNECTOR>				
VC15	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P				

The components identified by shading and mark ⚠ are critical for safety.
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Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite
Ne les remplacer que par une piece portant le numero specifie.

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1801	8-719-911-19	DIODE 1SS119	
D1802	8-719-911-19	DIODE 1SS119	
D1803	8-719-302-43	DIODE EL1Z	
D1804	8-719-302-43	DIODE EL1Z	
D1805	8-719-302-43	DIODE EL1Z	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1801	8-759-987-16	IC LM393P	
IC1802	8-759-987-16	IC LM393P	
IC1803	8-759-168-20	IC TA78L09S	

<COIL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1801	1-460-200-11	COIL (WITH CORE)	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1801	8-729-012-26	TRANSISTOR IRF540Y	
Q1802	8-729-012-26	TRANSISTOR IRF540Y	
Q1803	8-729-931-45	TRANSISTOR IRF614	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1801	1-249-435-11	CARBON	33K	5%	1/4W	
R1802	1-249-417-11	CARBON	1K	5%	1/4W	
R1803	1-247-887-00	CARBON	220K	5%	1/4W	
R1804	1-249-437-11	CARBON	47K	5%	1/4W	
R1805	1-247-895-00	CARBON	470K	5%	1/4W	
R1806	1-249-427-11	CARBON	6.8K	5%	1/4W	(KV-27XBR96S(U/C)
R1806	1-249-428-11	CARBON	8.2K	5%	1/4W	(KV-32XBR96S(U/C)
R1807	1-249-423-11	CARBON	3.3K	5%	1/4W	
R1808	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1809	1-249-433-11	CARBON	22K	5%	1/4W	
R1810	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1811⚠	1-216-463-91	METAL OXIDE	12K	5%	2W	F
R1812⚠	1-215-875-91	METAL OXIDE	10K	5%	1W	F
R1813	1-249-405-11	CARBON	100	5%	1/4W	
R1814	1-249-441-11	CARBON	100K	5%	1/4W	
R1815⚠	1-215-869-91	METAL OXIDE	1K	5%	1W	F
R1816	1-249-434-11	CARBON	27K	5%	1/4W	(KV-27XBR96S(U/C)
R1816	1-249-437-11	CARBON	47K	5%	1/4W	(KV-32XBR96S(U/C)
R1817	1-249-441-11	CARBON	100K	5%	1/4W	
R1818	1-249-406-11	CARBON	120	5%	1/4W	

<VARIABLE RESISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV1801	1-228-993-00	RES, ADJ, METAL GLAZE 4.7K	

<TRANSFORMER>

REF.NO.	PART NO.	DESCRIPTION	REMARK
T1801	1-437-212-11	TRANSFORMER, FERRITE (VPDT)	

`*************************************************************`

*1-643-663-11 HX1 BOARD
`*********`

*4-348-208-00 HOLDER, LED

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1603	1-124-589-11	ELECT	47MF	20%	16V	
C1604	1-124-589-11	ELECT	47MF	20%	16V	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1601	8-719-812-41	DIODE TLR124	
D1602	8-719-812-41	DIODE TLR124	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
HX137	*1-564-514-11	PLUG, CONNECTOR 11P	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1601	8-741-148-33	IC SBX1483-59	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1601	1-249-408-11	CARBON	180	5%	1/4W	
R1602	1-249-407-11	CARBON	150	5%	1/4W	
R1604	1-249-419-11	CARBON	1.5K	5%	1/4W	
R1605	1-249-421-11	CARBON	2.2K	5%	1/4W	
R1606	1-249-425-11	CARBON	4.7K	5%	1/4W	
R1607	1-249-430-11	CARBON	12K	5%	1/4W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S1601	1-572-198-11	SWITCH, KEYBOARD	
S1604	1-572-198-11	SWITCH, KEYBOARD	
S1605	1-572-198-11	SWITCH, KEYBOARD	
S1606	1-572-198-11	SWITCH, KEYBOARD	
S1607⚠	1-572-198-11	SWITCH, KEYBOARD (POWER)	

`*************************************************************`

*1-643-664-11 HX2 BOARD
`*********`

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
HX2-49	*1-564-518-11	PLUG, CONNECTOR 3P	
HX216	*1-564-525-11	PLUG, CONNECTOR 10P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1650	8-719-108-12	DIODE RD9.1EW	
D1651	8-719-108-12	DIODE RD9.1EW	
D1652	8-719-108-12	DIODE RD9.1EW	
D1653	8-719-108-12	DIODE RD9.1EW	
D1654	8-719-108-12	DIODE RD9.1EW	
D1655	8-719-108-12	DIODE RD9.1EW	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J1650	1-695-307-11	TERMINAL BLOCK, S 3P	

`*************************************************************`

*A-1373-421-A U BOARD, COMPLETE
`*****************`

<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1004	1-102-125-00	CERAMIC	0.0047MF	10%	50V	

U

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1005	1-126-301-11	ELECT	1MF	20%	50V	
C1006	1-164-096-11	CERAMIC	0.01MF		50V	
C1007	1-124-598-11	ELECT	22MF	20%	25V	
C1008	1-124-598-11	ELECT	22MF	20%	25V	
C1010	1-124-465-00	ELECT	0.47MF	20%	50V	
C1011	1-124-465-00	ELECT	0.47MF	20%	50V	
C1012	1-124-465-00	ELECT	0.47MF	20%	50V	
C1013	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C1014	1-126-163-11	ELECT	4.7MF	20%	50V	
C1016	1-126-163-11	ELECT	4.7MF	20%	50V	
C1018	1-126-301-11	ELECT	1MF	20%	50V	
C1020	1-124-242-00	ELECT	33MF	20%	25V	
C1021	1-124-465-00	ELECT	0.47MF	20%	50V	
C1022	1-124-242-00	ELECT	33MF	20%	25V	
C1026	1-164-048-11	CERAMIC	12PF	5%	50V	
C1027	1-164-048-11	CERAMIC	12PF	5%	50V	
C1028	1-124-242-00	ELECT	33MF	20%	25V	
C1029	1-124-282-00	ELECT	22MF	20%	16V	
C1030	1-124-478-11	ELECT	100MF	20%	25V	
C1031	1-102-963-00	CERAMIC	33PF	5%	50V	
C1034	1-124-282-00	ELECT	22MF	20%	16V	
C1036	1-124-282-00	ELECT	22MF	20%	16V	
C1037	1-124-282-00	ELECT	22MF	20%	16V	
C1039	1-124-478-11	ELECT	100MF	20%	25V	
C1047	1-124-465-00	ELECT	0.47MF	20%	50V	
C1048	1-126-301-11	ELECT	1MF	20%	50V	
C1049	1-124-598-11	ELECT	22MF	20%	25V	
C1051	1-124-465-00	ELECT	0.47MF	20%	50V	
C1055	1-124-589-11	ELECT	47MF	20%	16V	
C1056	1-124-499-11	ELECT	1MF	20%	50V	
C1057	1-124-768-11	ELECT	4.7MF	20%	50V	
C1059	1-124-499-11	ELECT	1MF	20%	50V	
C1060	1-124-499-11	ELECT	1MF	20%	50V	
C1061	1-124-499-11	ELECT	1MF	20%	50V	
C1062	1-102-129-00	CERAMIC	0.01MF	10%	50V	
C1063	1-124-768-11	ELECT	4.7MF	20%	50V	
C1066	1-126-101-11	ELECT	100MF	20%	16V	
C1070	1-126-103-11	ELECT	470MF	20%	16V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
U12	1-573-300-21	CONNECTOR, BOARD TO BOARD 18P	
U13	1-573-300-21	CONNECTOR, BOARD TO BOARD 18P	
U16	*1-564-513-11	PLUG, CONNECTOR 10P	
U22	1-566-942-11	CONNECTOR,HINGE(RECEPTACLE)30P	
U23	*1-566-367-11	CONNECTOR, HINGE (RECEPTACLE)	
U32	*1-564-510-11	PLUG, CONNECTOR 7P	
U47	*1-564-506-11	PLUG, CONNECTOR 3P	
U50	*1-564-505-11	PLUG, CONNECTOR 2P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1005	8-719-110-36	DIODE RD13ESB2	
D1009	8-719-110-36	DIODE RD13ESB2	
D1010	8-719-110-36	DIODE RD13ESB2	
D1011	8-719-110-36	DIODE RD13ESB2	
D1012	8-719-110-36	DIODE RD13ESB2	
D1013	8-719-110-36	DIODE RD13ESB2	
D1014	8-719-110-36	DIODE RD13ESB2	
D1017	8-719-110-36	DIODE RD13ESB2	
D1018	8-719-110-36	DIODE RD13ESB2	
D1019	8-719-110-36	DIODE RD13ESB2	
D1020	8-719-109-66	DIODE RD3.3ESB2	
D1021	8-719-109-66	DIODE RD3.3ESB2	
D1022	8-719-109-66	DIODE RD3.3ESB2	
D1025	8-719-911-19	DIODE 1SS119	
D1026	8-719-911-19	DIODE 1SS119	
D1027	8-719-911-19	DIODE 1SS119	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1002	8-752-056-50	IC CXA1545S	
IC1011	8-759-145-57	IC UPC4557C	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L1001	1-408-422-00	INDUCTOR	120UH	
L1002	1-408-422-00	INDUCTOR	120UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q1009	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1010	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1016	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1017	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1018	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1019	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1020	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1021	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1022	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1023	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1025	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1029	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1030	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1031	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1032	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1033	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1034	8-729-119-76	TRANSISTOR 2SA1175-HFE	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1011	1-249-435-11	CARBON	33K	5%	1/4W	
R1012	1-249-434-11	CARBON	27K	5%	1/4W	
R1013	1-249-417-11	CARBON	1K	5%	1/4W	
R1014	1-249-441-11	CARBON	100K	5%	1/4W	
R1015	1-215-437-00	METAL	4.7K	1%	1/4W	
R1016	1-249-441-11	CARBON	100K	5%	1/4W	
R1017	1-249-405-11	CARBON	100	5%	1/4W	
R1018	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1019	1-249-427-11	CARBON	6.8K	5%	1/4W	
R1023	1-249-405-11	CARBON	100	5%	1/4W	
R1026	1-215-437-00	METAL	4.7K	1%	1/4W	
R1028	1-249-434-11	CARBON	27K	5%	1/4W	
R1029	1-249-435-11	CARBON	33K	5%	1/4W	
R1030	1-249-417-11	CARBON	1K	5%	1/4W	
R1032	1-249-417-11	CARBON	1K	5%	1/4W	
R1033	1-249-393-11	CARBON	10	5%	1/4W	F
R1034	1-249-417-11	CARBON	1K	5%	1/4W	
R1036	1-249-440-11	CARBON	82K	5%	1/4W	
R1037	1-249-440-11	CARBON	82K	5%	1/4W	
R1038	1-249-440-11	CARBON	82K	5%	1/4W	
R1043	1-249-417-11	CARBON	1K	5%	1/4W	
R1046	1-249-413-11	CARBON	470	5%	1/4W	
R1048	1-249-405-11	CARBON	100	5%	1/4W	
R1050	1-249-405-11	CARBON	100	5%	1/4W	
R1051	1-249-417-11	CARBON	1K	5%	1/4W	
R1052	1-249-413-11	CARBON	470	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1054	1-249-405-11	CARBON	100	5%	1/4W	
R1055	1-249-413-11	CARBON	470	5%	1/4W	
R1056	1-249-405-11	CARBON	100	5%	1/4W	
R1057	1-249-441-11	CARBON	100K	5%	1/4W	
R1059	1-249-405-11	CARBON	100	5%	1/4W	
R1061	1-249-409-11	CARBON	220	5%	1/4W	
R1062	1-249-441-11	CARBON	100K	5%	1/4W	
R1063	1-249-409-11	CARBON	220	5%	1/4W	
R1066	1-215-437-00	METAL	4.7K	1%	1/4W	
R1067	1-215-437-00	METAL	4.7K	1%	1/4W	
R1068	1-215-437-00	METAL	4.7K	1%	1/4W	
R1069	1-215-437-00	METAL	4.7K	1%	1/4W	
R1070	1-249-411-11	CARBON	330	5%	1/4W	
R1071	1-249-431-11	CARBON	15K	5%	1/4W	
R1073	1-249-431-11	CARBON	15K	5%	1/4W	
R1077	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1078	1-249-418-11	CARBON	1.2K	5%	1/4W	
R1079	1-249-405-11	CARBON	100	5%	1/4W	
R1080	1-215-423-00	METAL	1.2K	1%	1/4W	
R1081	1-215-421-00	METAL	1K	1%	1/4W	
R1089	1-249-405-11	CARBON	100	5%	1/4W	
R1094	1-249-405-11	CARBON	100	5%	1/4W	
R1096	1-249-415-11	CARBON	680	5%	1/4W	
R1099	1-249-413-11	CARBON	470	5%	1/4W	
R1100	1-249-429-11	CARBON	10K	5%	1/4W	
R1101	1-249-405-11	CARBON	100	5%	1/4W	
R1110	1-249-415-11	CARBON	680	5%	1/4W	
R1116	1-249-441-11	CARBON	100K	5%	1/4W	
R1118	1-249-413-11	CARBON	470	5%	1/4W	
R1120	1-249-413-11	CARBON	470	5%	1/4W	
R1121	1-249-441-11	CARBON	100K	5%	1/4W	
R1122	1-249-413-11	CARBON	470	5%	1/4W	
R1133	1-249-405-11	CARBON	100	5%	1/4W	
R1134	1-249-405-11	CARBON	100	5%	1/4W	
R1137	1-249-411-11	CARBON	330	5%	1/4W	
R1138	1-249-415-11	CARBON	680	5%	1/4W	
R1139	1-249-413-11	CARBON	470	5%	1/4W	
R1140	1-249-413-11	CARBON	470	5%	1/4W	
R1141	1-249-413-11	CARBON	470	5%	1/4W	
R1142	1-249-415-11	CARBON	680	5%	1/4W	
R1147	1-249-405-11	CARBON	100	5%	1/4W	
R1148	1-249-405-11	CARBON	100	5%	1/4W	
R1149	1-249-417-11	CARBON	1K	5%	1/4W	
R1150	1-249-405-11	CARBON	100	5%	1/4W	
R1151	1-249 405-11	CARBON	100	5%	1/4W	
R1152	1-249-417-11	CARBON	1K	5%	1/4W	

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*A-1373-422-A UT BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1152	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C1153	1-164-096-11	CERAMIC	0.01MF		50V	
C1154	1-164-096-11	CERAMIC	0.01MF		50V	
C1155	1-126-103-11	ELECT	470MF	20%	16V	
C1158	1-124-598-11	ELECT	22MF	20%	25V	
C1159	1-124-598-11	ELECT	22MF	20%	25V	
C1160	1-124-598-11	ELECT	22MF	20%	25V	
C1161	1-124-598-11	ELECT	22MF	20%	25V	
C1164	1-126-103-11	ELECT	470MF	20%	16V	
C1165	1-126-301-11	ELECT	1MF	20%	50V	
C1166	1-126-301-11	ELECT	1MF	20%	50V	
C1167	1-126-301-11	ELECT	1MF	20%	50V	
C1168	1-126-301-11	ELECT	1MF	20%	50V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
UT9	*1-564-517-11	PLUG, CONNECTOR 2P	
UT11	*1-564-519-11	PLUG, CONNECTOR 4P	
UT22	*1-566-941-11	CONNECTOR, HINGE (TAB) 30P	
UT23	*1-566-641-11	CONNECTOR, HINGE (TAB) 18P	
UT35	*1-564-518-11	PLUG, CONNECTOR 3P	
UT38	*1-564-517-11	PLUG, CONNECTOR 2P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1151	8-719-110-36	DIODE RD13ESB2	
D1152	8-719-110-36	DIODE RD13ESB2	
D1158	8-719-110-36	DIODE RD13ESB2	
D1159	8-719-110-36	DIODE RD13ESB2	
D1160	8-719-110-36	DIODE RD13ESB2	
D1161	8-719-110-36	DIODE RD13ESB2	
D1162	8-719-110-36	DIODE RD13ESB2	
D1163	8-719-110-36	DIODE RD13ESB2	
D1164	8-719-110-36	DIODE RD13ESB2	
D1165	8-719-110-36	DIODE RD13ESB2	
D1166	8-719-110-36	DIODE RD13ESB2	
D1167	8-719-110-36	DIODE RD13ESB2	
D1168	8-719-110-36	DIODE RD13ESB2	
D1169	8-719-110-36	DIODE RD13ESB2	
D1170	8-719-110-36	DIODE RD13ESB2	
D1171	8-719-110-36	DIODE RD13ESB2	
D1172	8-719-110-78	DIODE RD33ESB2	
D1173	8-719-110-78	DIODE RD33ESB2	
D1174	8-719-110-78	DIODE RD33ESB2	
D1175	8-719-110-78	DIODE RD33ESB2	
D1176	8-719-110-78	DIODE RD33ESB2	
D1177	8-719-110-78	DIODE RD33ESB2	
D1178	8-719-110-78	DIODE RD33ESB2	
D1179	8-719-110-78	DIODE RD33ESB2	

<JACK>

REF.NO.	PART NO.	DESCRIPTION	REMARK
J1001	1-537-188-11	TERMINAL, PUSH (8P)	
J1003	1-573-970-11	BLOCK, (S) TERMINAL	
J1004	1-695-304-11	TERMINAL BLOCK, S	
J1005	1-695-054-11	JACK BLOCK, PIN	
J1006	1-573-970-11	BLOCK, (S) TERMINAL	
J1007	1-573-969-11	JACK BLOCK, PIN	
J1008	1-573-969-11	JACK BLOCK, PIN	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1153	1-249-403-11	CARBON	68	5%	1/4W	
R1154	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1155	1-249-417-11	CARBON	1K	5%	1/4W	
R1158	1-247-804-11	CARBON	75	5%	1/4W	
R1164	1-247-895-00	CARBON	470K	5%	1/4W	
R1165	1-247-895-00	CARBON	470K	5%	1/4W	
R1166	1-247-895-00	CARBON	470K	5%	1/4W	
R1167	1-247-895-00	CARBON	470K	5%	1/4W	
R1168	1-247-895-00	CARBON	470K	5%	1/4W	
R1169	1-249-403-11	CARBON	68	5%	1/4W	
R1170	1-249-403-11	CARBON	68	5%	1/4W	
R1171	1-247-895-00	CARBON	470K	5%	1/4W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R1172	1-247-895-00	CARBON	470K	5%	1/4W	
R1173	1-247-804-11	CARBON	75	5%	1/4W	
R1174	1-247-895-00	CARBON	470K	5%	1/4W	
R1175	1-247-895-00	CARBON	470K	5%	1/4W	
R1176	1-247-804-11	CARBON	75	5%	1/4W	
R1177	1-247-804-11	CARBON	75	5%	1/4W	
R1178	1-247-895-00	CARBON	470K	5%	1/4W	
R1179	1-247-895-00	CARBON	470K	5%	1/4W	
R1180	1-247-804-11	CARBON	75	5%	1/4W	
R1181	1-247-804-11	CARBON	75	5%	1/4W	
R1182	1-247-804-11	CARBON	75	5%	1/4W	
R1183	1-247-895-00	CARBON	470K	5%	1/4W	
R1184	1-247-895-00	CARBON	470K	5%	1/4W	
R1185	1-247-895-00	CARBON	470K	5%	1/4W	
R1186	1-247-895-00	CARBON	470K	5%	1/4W	
R1187	1-247-804-11	CARBON	75	5%	1/4W	
R1188	1-247-804-11	CARBON	75	5%	1/4W	
R1191	1-215-437-00	METAL	4.7K	1%	1/4W	
R1192	1-215-437-00	METAL	4.7K	1%	1/4W	
R1193	1-215-437-00	METAL	4.7K	1%	1/4W	
R1194	1-215-437-00	METAL	4.7K	1%	1/4W	
R1195	1-249-426-11	CARBON	5.6K	5%	1/4W	
R1196	1-249-426-11	CARBON	5.6K	5%	1/4W	

<SWITCH>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S1150	1-572-198-11	SWITCH, KEYBOARD	

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*A-1394-421-A S BOARD, COMPLETE
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<CAPACITOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3403	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C3408	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3409	1-124-589-11	ELECT	47MF	20%	16V	
C3411	1-124-034-51	ELECT	33MF	20%	16V	
C3442	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V	
C3446	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C3447	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C3448	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3449	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V	
C3451	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C3452	1-163-989-11	CERAMIC CHIP	0.033MF	10%	25V	
C3453	1-124-589-11	ELECT	47MF	20%	16V	
C3454	1-126-162-11	ELECT	3.3MF	20%	50V	
C3455	1-126-163-11	ELECT	4.7MF	20%	16V	
C3456	1-163-129-00	CERAMIC CHIP	330PF	5%	50V	
C3457	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C3459	1-124-589-11	ELECT	47MF	20%	16V	
C3460	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C3461	1-163-099-00	CERAMIC CHIP	18PF	5%	50V	
C3507	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C3508	1-164-005-11	CERAMIC CHIP	0.47MF		25V	
C3509	1-163-139-00	CERAMIC CHIP	820PF	5%	50V	
C3515	1-163-121-00	CERAMIC CHIP	150PF	5%	50V	
C3540	1-126-157-11	ELECT	10MF	20%	16V	

<CONNECTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
S42	*1-565-514-11	SOCKET, CONNECTOR 2P	
S42	*1-568-378-21	PIN, CONNECTOR 3P	
S43	*1-564-508-11	PLUG, CONNECTOR 5P	
S45	*1-564-511-71	PLUG, CONNECTOR 8P	
S46	*1-564-506-11	PLUG, CONNECTOR 3P	
S47	*1-564-506-11	PLUG, CONNECTOR 3P	

<DIODE>

REF.NO.	PART NO.	DESCRIPTION	REMARK
D3444	8-719-404-46	DIODE MA110	

<IC>

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC3401	8-759-403-44	IC MN1280-S	
IC3402	8-759-070-42	IC M37201M6-A18FP	
IC3441	8-759-708-05	IC NJM78L05A	
IC3442	8-759-084-12	IC LA7945	
IC3443	8-759-187-22	IC LC7458B-03	
IC3444	8-759-403-44	IC MN1280-S	

<COIL>

REF.NO.	PART NO.	DESCRIPTION		REMARK
L3401	1-408-421-00	INDUCTOR	100UH	
L3461	1-408-409-00	INDUCTOR	10UH	
L3462	1-408-421-00	INDUCTOR	100UH	

<TRANSISTOR>

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q3441	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q3444	8-729-903-10	TRANSISTOR FMW1	

<RESISTOR>

REF.NO.	PART NO.	DESCRIPTION				REMARK
R3401	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3402	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3403	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3404	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3405	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3406	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3407	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3408	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R3409	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R3441	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3442	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R3443	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R3444	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3445	1-216-689-11	METAL GLAZE	39K	5%	1/10W	
R3446	1-216-085-00	METAL GLAZE	33K	5%	1/10W	
R3449	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3450	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3451	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R3452	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R3453	1-216-679-11	METAL CHIP	15K	0.50%	1/10W	
R3454	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3455	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3456	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R3463	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3464	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3465	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R3472	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R3473	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3474	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R3504	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R3509	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R3511	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R3512	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W	

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie

S

REF.NO.	PART NO.	DESCRIPTION	REMARK
R3513	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3514	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R3519	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3520	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3521	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R3525	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R3526	1-216 073-00	METAL GLAZE 10K 5% 1/10W	
R3528	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R3529	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R3530	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R3531	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R3532	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R3535	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R3537	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R3540	1-216-073-00	METAL GLAZE 10K 5% 1/10W	

<CRYSTAL>

REF.NO.	PART NO.	DESCRIPTION	REMARK
X3401	1-577-358-21	VIBRATOR, CERAMIC	
X3441	1-577-364-11	VIBRATOR, CERAMIC	

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MISCELLANEOUS

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	⚠ 1-406-586-11	COIL, DEMAGNETIZATION (KV-32XBR96S(U/C))	
	⚠ 1-406-587-11	COIL, DEMAGNETIZATION (KV-32XBR96S(U/C))	
	⚠ 1-406-588-11	COIL, DEMAGNETIZATION (KV-27XBR96S(U/C))	
	⚠ 1-406-589-11	COIL, DEMAGNETIZATION (KV-27XBR96S(U/C))	
	⚠ 1-417-178-11	SELECTOR, ANTENNA (AS-2)	
	⚠ 1-451-393-11	DEFLECTION YOKE (Y34EXA) (KV-32XBR96S(U/C))	
	⚠ 1-451-394-11	DEFLECTION YOKE (Y29EXA) (KV-27XBR96S(U/C))	
	⚠ 1-452-616-13	NECK ASSY, PICTURE TUBE (NA323)	
	*1-555-400-00	CABLE, PIN	
	*1-557-056-31	CABLE, P-P	
	⚠ 1-696-002-12	CORD, POWER(WITH NOISE FILTER) 7A/125V	
V901	⚠ 8-733-731-05	PICTURE TUBE (M81KVA10X) (KV-32XBR96S(U/C))	
V901	⚠ 8-733-837-05	PICTURE TUBE (M68KUZ10X) (KV-27XBR96S(U/C))	

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ACCESSORIES AND PACKING MATERIALS

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	X-4031-013-1	SCREW ASSY, ORNAMENTAL	
	1-504-181-11	SPEAKER SYSTEM (13CM)	
	1-504-182-11	SPEAKER SYSTEM (13CM)	
	1-559-238-11	CORD, SPEAKER CONNECTION	
	3-757-188-21	MANUAL, INSTRUCTION (ENGLISH)	
	3-757-188-31	MANUAL, INSTRUCTION (FRANCH) (KV-27XBR96S(C),KV-32XBR96S(C))	
	3-757-188-41	MANUAL, INSTRUCTION (SPANISH) (KV-27XBR96S(U),KV-32XBR96S(U))	
	*4-041-259-01	BAG, PROTECTION (KV-32XBR96S(U/C))	
	4-036-347-01	BOX, SPEAKER (KV-32XBR96S(U/C))	
	*4-036-702-01	PLATE, TOP (KV-32XBR96S(U/C))	
	*4-036-704-01	CUSHION (UPPER) (ASSY) (KV-32XBR96S(U/C)	
	*4-036-706-01	CUSHION (LOWER) (ASSY) (KV-32XBR96S(U/C)	
	*4-036-711-01	INDIVIDUAL CARTON (KV-32XBR96S(U/C))	
	4-036-807-01	BRACKET (L), SPEAKER (KV-32XBR96S(U/C))	
	4-036-808-01	BRACKET (R), SPEAKER (KV-32XBR96S(U/C))	
	4-036-809-01	CUSHION, RUBBER	
	4-037-304-01	BRACKET (L), SPEAKER (KV-27XBR96S(U/C))	

REF.NO.	PART NO.	DESCRIPTION	REMARK
	4-037-305-01	BRACKET (R), SPEAKER (KV-27XBR96S(U/C))	
	*4-037-680-01	CUSHION (LOWER) (ASSY)(KV-27XBR96S(U/C))	
	*4-037-681-01	CUSHION (UPPER) (ASSY)(KV-27XBR96S(U/C))	
	*4-037-684-01	INDIVIDUAL CARTON (KV-27XBR96S(U/C))	
	*4-384-027-01	BAG, PROTECTION (KV-27XBR96S(U/C))	
	9-910-999-32	BAG, POLYETHYLENE	

REMOTE COMMANDER

REF.NO.	PART NO.	DESCRIPTION	REMARK
	1-693-156-21	REMOTE COMMANDER (RM-Y114A)	
	9-902-623-01	COVER, BATTERY (FOR RM-Y114A)	
	9-902-624-01	COVER (FOR RM-Y114A)	

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